



ANNUAL REPORT  
OF THE  
COMMISSIONERS  
OF THE  
DISTRICT OF COLUMBIA

FOR  
THE YEAR ENDING JUNE 30, 1879.

*Spec. Appointments, 407,  
Contracts bet. July 1/78 and July 1/79*

WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1879.





# ANNUAL REPORT

## OF THE

### COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

OFFICE OF THE COMMISSIONERS  
OF THE DISTRICT OF COLUMBIA,  
*Washington, November 26, 1879.*

To the PRESIDENT :

The receipts into the treasury of the District of Columbia from all sources for year ending June 30, 1879, were as follows :

Balance on hand July 1, 1878, including \$998.47 collected on account of repairing Pennsylvania avenue, and not included in auditor's statement of last year's balance.	\$61,142 84	\$61,142 84
Taxes and revenues for general expenses .....	1,555,386 57	
Appropriations by Congress for general expenses .....	1,716,533 23	
	<hr/>	3,271,919 80
Special appropriations :		
For filling canal .....	15,000 00	
For food, medicine, and medical attendance for poor .....	5,000 00	
Water rents and taxes .....	69,053 67	
Trust funds .....	45,549 21	
	<hr/>	134,602 88
Total receipts .....		3,467,665 52

The expenditures for the year ending 30th June, 1879, under the various heads for which estimates are by law required to be made annually, amounted to \$3,060,906.40, as follows, viz :

Replacing wood pavements .....	\$299,285 02	
Repairs and improvements of streets .....	34,695 53	
Construction of main and lateral sewers .....	44,392 17	
Repair and cleaning Tiber sewer .....	10,558 74	
Permit work .....	2,397 61	
Construction and repair of bridges .....	1,938 15	
Charities, reformatories, &c .....	132,411 64	
Interest and sinking fund .....	1,155,583 55	
Public schools .....	365,591 77	
Metropolitan police .....	295,761 53	
Fire department .....	131,411 24	
Health department .....	23,487 57	
Police court .....	15,704 61	
Engineer's department .....	143,817 08	
Lighting streets .....	118,019 73	
Other expenses .....	285,850 46	
	<hr/>	3,060,906 40
Water department (including \$29,395.40 for stand-pipe) ..	\$82,636 08	
Trust funds .....	44,753 80	
Filling canal, special appropriation by Congress .....	14,985 77	
Food, medicine, and medical attendance for poor .....	6,715 00	
	<hr/>	149,140 65
Balance on hand July 1, 1879, (including trust and water funds) .....		257,618 47
Total .....		3,467,665 52

## BONDED DEBT.

Under the provisions of the act approved March 10, 1879, authorizing the issue of 5 per cent. bonds of the District of Columbia for the purpose of refunding certain bonds of said District, \$1,092,300 of the new bonds prepared by the Commissioners were sold by the Secretary of the Treasury at a premium of \$8,552.06. The saving in annual interest thus effected will be \$10,923. Since July 1, 1878, there has been a total reduction of \$418,326.67 in the principal of the District bonded debt, and a total reduction of \$30,154 in the annual interest thereon.

## UNFUNDED DEBT.

The Commissioners recommend that action be taken in the matter of the unfunded debt of the District, on the basis of payment in 3.65 bonds.

## GENERAL TAXES.

The payment of the last half of the tax for year ending June 30, 1879, as well as of all delinquent taxes, was delayed by the pending in Congress of the act, finally passed and approved June 27, 1879, authorizing the settlement, on or before October 1, 1879, of all taxes due to the District by payment of principal and 6 per cent. interest thereon, in lieu of the rate and penalties imposed in the laws levying such taxes.

The total receipts of general taxes under the act of relief above cited, from its passage to October 1, was \$86,767.18, of which \$77,933.44 was paid in drawback certificates, leaving still in arrear on 1st November, 1879, \$1,202,095.47.

That more effective laws are needed to enforce the payment of taxes is apparent from the above exhibit. The amount of arrearages increases yearly, and seriously embarrasses the management of District affairs, and the continuance of this state of things not only encourages the growth of the evil, but is unjust to citizens who pay their taxes promptly.

## ASSESSMENT OF PROPERTY.

Numerous errors and irregularities have been found to exist in the present assessment of real property in the District of Columbia, which the Commissioners have no authority to correct. Errors and omissions are liable to occur in every general assessment; and, although the assessors are required by law to hear appeals for a short period after completing their work, it generally happens that either from the absence, ignorance, or neglect of tax-payers many mistakes and defects remain uncorrected. We therefore recommend that the Commissioners be authorized to appoint eight suitable persons, one to be selected from each of the police districts, who, with the assessor as presiding officer, shall constitute a permanent board of review to hear all complaints, and to revise, correct, and equalize all assessments which, in their judgment, may require correction; said board to convene whenever notified by the Commissioners, and to report to the assessor once a month all new improvements and other changes affecting the taxable property within their respective districts.

## SPECIAL ASSESSMENTS.

The revision of assessments for special improvements, directed by acts of Congress approved June 19, 1878, and June 27, 1879, has been pushed

with all the force that could be used effectively, but is not yet completed. The labor is of such character that its progress is dependent upon the working capacity of one person having it in charge.

From July 1 to October 1, 1879, the payments on account of special assessments have been as follows, viz:

In money .....	\$267 57
In board of audit certificates .....	1,000 00
In 8 per cent. (greenback) certificates .....	41,825 45
In drawback certificates .....	77,296 92
Total .....	120,389 94
There are of 8 per cent. certificates now outstanding .....	686,150 00
On which the interest estimated to be due is .....	220,000 00
Total .....	906,150 00

for payment of which all special assessments, except those for which liens are held by third parties, are pledged.

The unpaid assessments thus pledged, less drawbacks issued on account of revision, amount to \$1,088,596.96.

The third section of act of June 27, 1879, provides that drawback certificates issued in accordance with its provisions "shall be received in payment of *all* special assessments." This was construed by the board to include those assessments for which certificates are held by third parties. The board was also advised by the attorney for the District that a certain class of assessments made by the Territorial governor, as successor of the mayor, are also included in the acts authorizing the revision. These assessments were made for the full cost of the work done, and the Commissioners therefore found it necessary to make their revision conform to the organic act of February 21, 1871, which, by the 37th section, limited assessments for special improvements to one-third of the actual cost of the improvement. The outstanding certificates for this class of assessments are all held by third parties, and the payments on account of the one-third assessed are, to a large extent, made in drawbacks.

#### DISTRICT CODE.

The Commissioners venture to request that you will urge upon the attention of Congress the imperative need existing for a civil and municipal code of law for the District of Columbia.

A municipal code was prepared and presented to the last Congress, but not acted upon. By a clause in the sundry civil bill, approved March 3, 1879, the Commissioners were directed to cause a code of laws to be prepared, and the sum of \$5,000 was appropriated therefor. This work is completed, and will be presented to Congress.

#### WATER RENTS.

Under the authority of the act approved June 10, 1879, the Commissioners established water-rates based chiefly on valuation of improvements, exclusive of land. Four dollars was taken as a uniform charge for the introduction of water, to be increased, where water-fixtures existed inside of buildings, in accordance with their valuation considered as a factor in computing the consumption of water, which would measurably depend upon size and character of establishment, style of living, &c.

The purpose was to increase the revenue, in order to repay certain

advances from the general fund on account of interest and sinking fund of the water bonds.

The reasons for the increase, and the views of the Commissioners in respect to the whole subject, will be found fully set forth in a letter addressed to water-takers and in a communication to the subcommittee of the Senate Committee for the District of Columbia, found in the appendix to this report.

The effect of the new rates was to create much dissatisfaction, which arose principally from the fact that in large portions of the cities the water supply is deficient. People naturally expect to receive a full equivalent for their money. The Commissioners are without means to remove this cause of complaint, for which they are in no way responsible.

Appeal was made to the supreme court of the District of Columbia, which, while sustaining the powers of the Commissioners over the question of rates and the legality of the mode adopted, denied their power to put it into execution before the commencement of the legal water year, viz, January, 1880. In consequence of this decision the Commissioners refunded to all who had paid the new rates the difference between the new and old rates or credited it on their water-bills for the ensuing year, as was preferred.

As the Senate directed an examination into the question of water supply by the Committee on the District of Columbia, who have the matter now under consideration, the Commissioners refrain for the present from further discussion of the subject.

#### RAILROAD STATIONS.

A bill directing us to report to Congress some suitable location for a union depot for all railways entering the District of Columbia passed the House of Representatives at its last regular session, but, although favorably acted upon by the District Committee of the Senate, it was not reported back to that body.

Washington is increasing rapidly in population, and the improvements now in progress are generally of a superior order. But large sections of the city in the vicinity of the tracks and stations of the Baltimore and Ohio and Baltimore and Potomac Railway Companies do not share in the development and prosperity elsewhere so apparent; and it happens that these tracks and stations are in the vicinity of the Capitol, upon the north and south sides. The Capitol grounds, the grounds of the Executive Mansion, and those which connect them, form together a magnificent park of 331 acres, in the heart of the city; but, occupied and severed as it is by railway tracks and depot, it can never be effectively improved, and its beauty as well as its enjoyment by the public are fatally marred. This is, we think, a grievance which should no longer be tolerated.

Should it be found impracticable to lead all tracks to one point, then a site upon the north side, as near Boundary street as practicable, and one on the river-front on the south side, should be *now* selected, as permanent stations, to which all railways entering upon the respective sides of the city should lead.

Paris is an example of a city where the railway stations are found at the barriers; and neither the traveling public nor the business community of that great capital seem to suffer from the exclusion of railway tracks from its streets.

Washington suffers now and will continue to suffer so long as two railway companies are allowed to occupy their present depot sites and to monopolize the streets leading thereto. Although the capital of the nation, it has no business except such as pertains to supplying the

wants of its citizens; and no considerations of commercial interests can be urged as a reason for permitting railroads to penetrate to its center and mar its growth and beauty. We again earnestly invite the attention of Congress to the subject.

#### STREET RAILWAYS.

The Commissioners also, in this connection, call attention to the importance of adopting, as soon as may be, a general and comprehensive plan for the location of street railways, to which existing companies should be required to conform in any extension of their lines which may become necessary for the public accommodation. This is desirable, in order to avoid the multiplication of such corporations and the consequent inconvenience which must result to the public, as well as to prevent the unnecessary occupation of the streets by such roads.

#### POTOMAC RIVER FRONT.

The condition of the river frontage of the city demands the immediate and careful consideration of Congress, not only as a measure of health, but also with reference to the future commercial interests of the city. The gradual accretions on the flats have reached that point when it is necessary that some decisive action should be taken to abate what is rapidly becoming a gigantic and intolerable nuisance. Three plans have been proposed:

1st. To deflect the river around Easby's Point, and as nearly as possible along the Washington shore.

2d. To divide the river into two channels, one along the Washington and the other along the Virginia shore.

3d. To retain but one channel along the Virginia shore, and to fill from the present city to that line.

To the first of these plans three objections arise:

1st. The practical difficulty of forcing a river subject to violent floods into the desired position.

2d. That a large extent of malarial marsh will remain on the Virginia side, to be a perpetual nuisance to the city.

3d. From the curvation of the channel, the deep water for a long distance below Easby's Point will be upon the Virginia side and the shoal water for that distance along the city front, thus sacrificing what will in time be a valuable wharfage.

With reference to the harbor of Washington and the three plans above mentioned, the board of survey ordered by act of Congress approved March 5, 1872, reported as follows:

1. The so-called harbor of Washington consists of merely an insignificant channel, running along the Potomac front from the Arsenal Point (formerly known as Greenleaf's Point, the upper point at the junction of the Anacostia with the Potomac) up to the end of the wharf at Seventeenth street, a distance of 4,000 yards, with also a small channel running along the Anacostia front.

2. The Potomac channel has an average width of 400 feet up to Maryland avenue or Long Bridge, between the depths, on either side, of 6 feet at mean low-water, narrowing off the arsenal lower wharf to 250 feet. The greatest depth at mean low-water which can be carried up through a small gully in the channel to the lower wharves at Sixth street southwest is 11 feet, and up to Maryland avenue 8 feet. From the Long Bridge up this channel, gradually narrowing, shoals and becomes lost in the flats of Seventeenth-street wharf.

3. The Anacostia channel has an average width of but 350 feet between the depths of 6 feet on either side, narrowing at one point to 250 feet. The greatest depth at mean low-water which can be carried up through a small gully in the channel to the navy-yard is 14 feet. That portion of the channel alone extending from the arsenal

to the bridge just above the navy-yard is considered. This channel extends, however, up the Anacostia, gradually decreasing in depth until at a distance of one mile above the bridge it has a depth of but 6 feet.

4. The harbor of Georgetown consists of a deep portion of the Potomac River, lying between the front of the town on the left bank and a small portion of the right bank, and Analostan Island, near the right bank. The Georgetown and Alexandria Canal crosses the river at the upper end of the town, 1,500 feet above Analostan Island, by an aqueduct, at a height of about 30 feet above mean high-water, supported on stone piers, which also support a bridge above the aqueduct. This harbor has an average width of 800 feet, with an average depth of 25 feet at mean low-water. But the greatest *natural* depth over the bar, in the main channel of the Potomac, just below this harbor, is but 10 feet at mean low-water. This depth has been increased, by dredging, to 15 feet, with a width at the bottom of the channel of 200 feet.

5. This main channel runs down from Georgetown Harbor, between Analostan Island and Easby's Point (the south end of Twenty-seventh street west), along the right bank of the river, as far as the southwest end of Long Bridge, and thence runs toward the lower point of the mouth of the Anacostia, called Giesborough Point, off which it joins the channel from the Anacostia and that from the Potomac front of Washington, and thence the three form the deep channel which continues down the river.

The length of this channel, from the canal aqueduct to deep water off Giesborough Point is 25,000 feet.

6. Between the main channel of the Potomac leading from Giesborough Point to Georgetown harbor, on its southwest and west sides, the small channel along the Washington front on the northeast and east sides, the shore lying between Seventeenth street west and Twenty-seventh street west (or Easby's Point) lies an immense marshy flat of over 1,000 acres in extent. One-third of this flat is a marshy land, out at low-water, with but one to four feet of water upon the remainder. This marsh-land has accumulated with greater rapidity during the last twenty years, from the constantly increasing deposits of the materials brought down by the Potomac, as the country above is cleared of forests and put under cultivation.

These materials find a natural place of deposit at this place, as the Potomac here changes entirely, from a narrow mountain stream to a broad, lake-like river, which character, with broad flats having a deep channel through them, it retains until near its mouth.

7. The deposits upon the flat referred to, in front of Washington, increase greatly every year, as do the marsh and water grasses which grow rankly on all parts of it, becoming annually more and more obnoxious in every way.

The reclamation of this flat is an absolute necessity for the preservation of the health of the city, and must be included in any plan, aside from commercial purposes, for the improvement of the water-front of Washington.

8. Three general plans only are reasonably feasible, but the details may be greatly varied. These general plans are—

A. To carry the main channel from the lower end of Analostan Island across the flats above Long Bridge and below Easby's Point into the small channel running along the Washington front, at or near the intersection of the extensions of Seventeenth and C and D streets, southwest, and thence continuing along the present front of the city until it joins the deep channel of the river just below the arsenal.

B. To have two channels, forming the flats above and below Long Bridge into an island. The main deep channel to remain along the right bank of the river down to Gravelly Point (just below Long Bridge), and thence to the deep channel off Giesborough Point. The second and smaller channel to run from a point, just below Easby's Point across the flats, with its upper edge touching the end of the wharf at Seventeenth street west, and thence along the present Washington front until all the channels join the deep channel of the river off Giesborough Point.

C. To have but one channel of sufficient width and depth for all purposes; a direct continuation of the river at Georgetown, to run along the right bank of the river as far down as Gravelly Point, and thence directly towards Giesborough Point on the left bank, joining the deep channel of the river at that point, following nearly the present main channel of the river.

9. The plan A does not reclaim the immense flat in front of the city, this reclamation being an absolute necessity for sanitary as well as commercial purposes. This flat would rapidly become an enormous marsh opposite the city, and upon that side from which the prevalent winds blow, especially in summer and autumn. The cost for excavation in this plan would equal that in either of the other plans, and its cost for filling up the remainder of the great marshy flats lying on the right of the channel thus made, to the right bank (a filling necessary for sanitary reasons), would greatly exceed the cost of filling in either of the other plans, and these flats would be of comparatively no value when filled.

The plan B reclaims and utilizes, as does plan C, the whole of the flat lying in front of the city, but forms it into an island. The cost of its filling and excavation does not differ greatly from that of plan C, but the cost of its bulkhead greatly exceeds that of the latter. It has the advantage of much greater frontage, viz: B about, for both harbors, 58,500 feet, and C about 37,000 feet, exclusive of piers, wharves, &c. These last, in B, could be nearly double those in C. In the plan B there would be a wide channel separating it from the city, involving a large additional cost for bridges; less land would be reclaimed, and none of it advantageously available for governmental uses. But it would afford greater advantages for the drainage and sewerage of a large part of the city.

The plan C reclaims all the flats, and advances the city front directly to the edge of the harbor channel; affords abundant frontage, about 37,000 feet, exclusive of piers, wharves, &c.; is much less expensive, and gives about 455 acres of land most advantageously located for government purposes.

10. This last plan, C, is the one adopted.

It is proposed to modify the plan of the board of 1872 in three particulars:

1st. By leaving the present inside or Washington channel below the Long Bridge, providing suitable sluicing-basins for the purpose of keeping the channel in proper sanitary condition.

2d. By reducing the width of the outer or Georgetown channel to 2,000 feet.

3d. By changing somewhat the proposed distribution of the reclaimed lands in order to correspond to the above modifications.

The width of the main channel is determined as follows:

The low-water sections of the river give the following areas in square feet, viz:

At Long Bridge, H. R. Report No. 264, February 10, 1834.....	23,977
Section at arsenal (small area on marsh south of main channel omitted) .....	23,175
Sections at Long Bridge, west side.....	25,017
Sections at Long Bridge, east side.....	27,978
Mean .....	26,497

The obstruction in and about the piers of the Long Bridge make the sections at that point only approximate. It may be assumed, however, that the mean of the three sections at and below the Long Bridge will give a fair approximation to the natural low-water channel-way of the river. The mean thus found is 24,549 square feet. With a channel-way of 2,000 feet the mean depth should be 12.27 feet. With this mean depth the extreme channel depth should be over twenty-five feet. The mean of the sections on the bridge for the present main channel is 21,356 feet, the width is about 2,000 feet, or, deducting one-twentieth for piers and obstructions, 1,900 feet. The mean depth is 11.24 feet, and the extreme depth about 26 feet.

The sectional area of the proposed channel at the Long Bridge, assuming a rise at that point of 9 feet above mean low water, will be 41,646 feet; the present area is 44,134 feet. It will be necessary then to take out the causeway now existing at the south end of the bridge, 219 feet in length, to the low-water mark. This will increase the area to 43,617 feet.

During the freshet of 1877 the rise at Easby Point was 14 feet; at Seventeenth street, 10 feet; at the Long Bridge, 9 feet, and at the arsenal, 8.4 feet above low water. The relation between these different heights shows that the Long Bridge presented no obstruction to the free passage of the waters. As a measure of safety it might be well to carry the bridge, in trestle, for a distance sufficient to give a total high-water sectional area of 45,000 feet.

The river at Easby's Point is reduced to a low-water section of 18,900 feet, added to which the configuration of the shore is such as to throw



the current of the main channel strongly against the Virginia side, and to form a broad morass under the lee of the point. It is extremely important that all the wharfage line down to Seventeenth street should be preserved, and that there should be a uniform depth along the whole of this frontage. The channel should therefore be opened by cutting off the point, giving it an area as great as it can probably maintain; that is, about 24,000 feet. If the depth along the bulkhead is assumed to be 23 feet, there will be 222 feet to be cut from the point. The excavation will be mostly in rock, but the greater part in open cutting. It seems most probable that the point of Analostan Island should also be removed to the depth of about six feet below low water, in order to throw the main channel more easily against the proposed line of the Washington shore. This is, however, a matter of no pressing importance, since the direction of the main channel may be controlled by a retaining wall, composed of rough stone, carried down from the island in the position indicated. The channel at this point should be about 1,500 feet in width. With a rise of 10 feet in time of flood, the sectional area would be 39,000. The channel-way back of Analostan Island, or the section of the river, should then be opened to such a width as to give about 5,000 feet additional area. By this means the flood-line along the Georgetown wharves would be lowered about three feet. It would seem better, if possible, to avoid opening the Analostan chute on account of disturbing the regimen of the river below. This might be done by cutting the channel to a somewhat greater width at the head of the island. This, however, is a matter which may be left for future consideration. We may say with certainty that the bar in the Georgetown channel will disappear when the works here outlined shall have been completed.

#### THE WASHINGTON CHANNEL.

This channel, being stopped at the Long Bridge, will become an inside basin. With such an arrangement proper means must be taken to keep the water in a pure and wholesome condition. To accomplish this end flushing or sluicing basins are to be provided on the present flats above the bridge, into which the water from the outer channel may be admitted at high tide by automatic gates. The waters so accumulated will be used to flush the inner channel on the last third of the ebb tide. The total area of these basins is one hundred and nine acres. As the mean rise of the tide is three feet, the quantity of pure water passing from them into the inner channel with each tide will be about 14,000,000 of cubic feet. The entire contents of a channel-way 500 feet wide, with a mean depth of 12 feet, will be 54,000,000 cubic feet. The inflowing tides will supply 27,000,000, while the flushing basins will supply 28,000,000. Thus the water will be entirely displaced each day. For a channel of greater dimensions, larger basins may be provided below the present causeway.

#### THE RECLAMATION OF THE FLATS.

With this general scheme the flats to be reclaimed form themselves into three natural divisions: 1st. The portion lying below Easby's Point and above Seventeenth street; 2d, the area between Seventeenth street and the causeway of the Long Bridge; 3d, the flat extending from the Long Bridge to the Arsenal Point and included between the two proposed channels.

Each of these divisions will require a different treatment. The immediate object to be attained is to put the flats in such condition that they

will no longer be the sources of malarial disease. With this great end in view a bulkhead line should be carried from Easby's Point to the Long Bridge. The area above Seventeenth street and within the bulkhead should be filled to a height of one foot above mean high tide, and drained by automatic tidal gates in the manner usually practiced in the reclamation of other tidal marshes. It would then remain in the condition of a meadow until by the growth of the city it is required for business purposes.

The portion lying below Seventeenth street and above the Long Bridge should be filled to extreme high water, and added to the public parkings, thereby securing to these grounds a river frontage, and including the open lake and ornamental ponds which form the sluicing basins for the inside channel.

The reclaimed lands below the Long Bridge should be filled to the height of two feet above ordinary high tide, forming meadows which would only be overflowed at long intervals during extreme high water. In this condition they might remain until required for business purposes.

The inside channel should be bulkheaded on the Washington shore, and along the flats simply secured by a slight embankment with a footing of rough stone.

The main embankment, extending from Easby's Point to the Long Bridge, should be secured by a footing of rough stone and riprap. The present width has been taken at fifty feet for the purpose of forming a driveway along the water-front.

The system of sewers emptying at Seventeenth street should be carried out to deep water through an open canal nine feet in depth, with reverted banks to prevent the lodgment of sewage at low tide. The total area of lands reclaimed will be about seven hundred and twenty acres, of which one-third will be thrown into the public parkings.

The estimates are not yet completed, but will aggregate about \$1,300,000.

#### PAVEMENTS.

The distribution of the pavements of the city is as follows:

	Square yards.	Miles.
Wood.....	558,880	23.6
Concrete and asphalt.....	935,973	36.8
Stone block.....	333,256	13.2
Rough stone and cobble.....	421,849	20.3
Macadam.....	187,105	7.3
Gravel.....	534,366	23.3
Unimproved streets.....	1,904,545	91.6

There were originally laid in the city, 1,005,231 square yards of wooden pavements. At the close of the present fiscal year there will remain of this about 480,000 square yards. The remainder will have been replaced by asphalt or stone. The wood pavements are for the most part impassable, and the first and most pressing need is that those still remaining should be taken up as rapidly as possible. A portion, however, upon outlying streets, such as the northern part of Sixteenth street, may be left for the present without injury to the general interests of the city. This work will probably consume all the available funds of the city for the next three years.

During the past year there have been laid 154,520 square yards of asphalt, 56,944 square yards of stone block, 1,310 square yards macadam, and 1,093 square yards of compressed asphalt block pavements. Some changes have been made in the specifications for asphalt pavements which, so far as can be now determined, promise good results.

The older coal-tar, or, as they are generally called, concrete pavements, vary greatly in their condition. They were, as a general rule, experimental in their composition, being laid under a number of different patents. Those laid at a later date are for the most part in good order. This is especially true of the composite pavements containing asphalt and coal-tar. Some of these have proved most excellent and durable roadways, having been down four years, with little or no repairs.

In their last report the Commissioners recommended that a sufficient sum to entirely relay the impassable pavements of the city should be provided at once by direct appropriation or otherwise. This recommendation did not meet the approval of Congress, and it simply remains to accomplish the work as the surplus revenues of the District will permit. Under these circumstances, people residing upon streets paved with wood will be, in many cases, compelled to endure them for the next two years or more.

#### SEWERS.

Appropriations were made at the last session of Congress to begin the construction of the intercepting sewers designed to relieve the low grounds along the avenue and B street.

The greater part of the heavy work on the New York avenue sewer and outlet has been done, and an estimate is presented for its completion, and also for completing and securing the canal at the outlet to the deep water of the river channel. The Boundary street auxiliary sewer has been delayed by the failure of the first contractors. It has since been let to another contractor, and the work is progressing in a satisfactory manner.

#### SURVEY OF THE DISTRICT.

An estimate is presented for beginning a detailed survey of the District, with reference to the future extension of certain avenues beyond the present city limits. It is found that with the growth of the city the suburbs are rapidly being laid out without in any way conforming to the grand central plan. It is thought that a map of the district should be prepared after the necessary detailed surveys shall have been completed, upon which the extensions of the various avenues may be presented, which, after receiving the approval of Congress, will become the guiding lines for future additions to the city.

#### TOLL-ROADS.

The Commissioners recommend the condemnation of the only remaining toll-road in the District through Tennallytown to the District line.

#### CORONER'S JURIES.

The small sum appropriated by the last Congress to pay coroner's juries being insufficient to pay all such claims, the Commissioners thought it best to pay none. We now recommend that a coroner's jury shall consist of six persons, who shall serve without pay.

#### PUBLIC SCHOOLS.

The cost of conducting the public schools in the District of Columbia for year ending 30th June, 1879, notwithstanding the large increase of pupils as shown by the report of the board of trustees, hereto appended,

was \$365,591.76, being less than for the preceding year, a fact highly creditable to the management of the trustees, who, with unrequited and self-sacrificing zeal, devote themselves to this important work. The number of pupils enrolled for the same year is 25,130, making the expense, per capita, for education in the District of Columbia, \$14.55, or less, it is believed, than in most large cities in the United States.

We feel that our duty would not be discharged if we did not again call attention to the great need for additional school-buildings, and to the entire inadequacy of the means at our disposal to supply this important want. More than one-third of the school-rooms now in use are rented, and these rented rooms, involving an annual expense of over \$30,000, are, as a rule, unfit for the purpose both to health and convenience. We, therefore, approve the suggestions contained in the report of the trustees that the school-fund of \$70,630 49, now invested in 3.65 District of Columbia bonds, be devoted to the erection of additional school-houses, and that the lots in square numbered 446, purchased by the District for a market, be utilized in the same way. These lots, since the erection by private enterprise of a spacious market-house on square numbered 515, are not required for the purpose intended, and the Commissioners are of opinion that the fund and lots named could be most economically and beneficially used to supply, in part, the urgent need of additional school-buildings. The erection of the two school-houses authorized by the sundry civil appropriation act of March 3, 1879, and now in progress, has been retarded by the failure of the contractor; but it is hoped they will be completed and ready for use before the beginning of another school year.

#### WASHINGTON ASYLUM.

We invite special attention to the report of the Commissioner of the Washington Asylum. While the number of its inmates has considerably increased during the last fiscal year, there has been no material increase of expense, and its sanitary and moral condition has greatly improved.

The center and north wing of the new work-house have, since our last report, been completed at a cost of \$22,572.06, and the male inmates heretofore accommodated in the alms-house have been removed to the new building; and to this extent the evil and injustice of compelling the honest poor to live in daily contact with criminals have been abated. But the female convicts are, of necessity, still living under the same roof with this unfortunate but unoffending class of public beneficiaries. We, therefore, again, recommend the early and complete abatement of the wrong by the erection of the south wing of the work-house for the accommodation of female offenders. The cost of this addition, the foundations of which are already prepared, the commissioner of the asylum estimates at \$16,000.

He also again recommends that the grounds heretofore used for a naval and army magazine, which adjoins the lands of the asylum, be added to the latter. The Secretaries of War and Navy have officially signified their assent to this use of the magazine grounds, and the consent of Congress is all that is required to consummate a measure of great value both to the United States and the District of Columbia. The buildings on these grounds are substantial, and such of them as are suitable could at small expense be used for workshops, in which the skilled labor of the work-house and United States jail could be utilized, and the unskilled inmates be trained in the knowledge and habits of useful industry.

Some of these buildings would also furnish increased accommodations for the hospital and prison of the asylum, and thus enable its managers to effect, without material expense, important reforms suggested in their reports, but which for want of such accommodations, are now impracticable.

As a further measure of economy, and of moral reform for the asylum, the commissioner recommends the purchase of a farm of 300 acres, having a river front and within convenient distance, to be used as a depot for the offal from the cities and for the production of necessary supplies for the asylum. All garbage and ordure, now transported at great expense many miles down the Potomac, and there wasted, could be taken to this depot from the magazine wharf by pauper and penal labor, and converted to fertilizing uses on the lands of the asylum and on neighboring farms. The labor of all classes of vagrants and beggars that infest our streets might also be utilized on this farm to their own benefit and the relief of the public. These views of the commissioner of the asylum have the support of the health and police departments of the District, and we earnestly commend them to favorable consideration. The expense involved in this recommendation would not exceed \$50,000.

#### INDUSTRIAL HOME SCHOOL.

The experience of every year of its existence has added fresh evidence of the value and beneficence of this important institution. During the past year a public school has been established within its walls by the board of school trustees of the District for the benefit of its fifty inmates and of children in its neighborhood. A substantial addition of three stories, comprising a large school-room, a workshop, and laundry, has also been made to its accommodations, at a cost of about \$2,200. Of this sum its public-spirited and frugal managers have contributed \$1,500 from the meager appropriation of \$5,000 made by Congress for its maintenance during the current fiscal year. Although established, and thus far chiefly sustained, by private benevolence, it is destined, we believe, to solve successfully the important problem of industrial education as a factor in our system of public instruction. This consideration is the more important because by the adverse influence of labor organizations, the apprentice system, formerly in use for the instruction of youth in the various trades and industries, has been virtually abandoned.

#### INEBRIATE ASYLUM.

We have been requested by highly respected citizens engaged in the benevolent effort to establish in this District a national asylum for inebriates, to invite your attention and the attention of Congress to the importance of this enterprise. A charter for this purpose was granted by Congress in 1876, but the corporation, as yet, is without the necessary means to organize the institution, and the finances of the District do not warrant the Commissioners in assuming any responsibility for this humane object. This class of patients are not accepted by medical authorities as proper subjects for treatment in asylums for the insane, and the management of the Government Asylum in the District of Columbia is in harmony with this view of the case. The subject, therefore, taking in view the large number of Federal employes in the civil, military, and naval service, appeals strongly to the sympathy of Congress.

## BOARD OF CHARITIES.

We also recommend that the Commissioners be authorized to appoint a board, consisting of five citizens of recognized integrity and intelligence, to serve without compensation, who, subject to the control of the Commissioners, shall have power, and whose duty it shall be, to visit, inspect, and supervise all charitable, reformatory, and penal institutions supported in whole or in part by the District of Columbia, and under whose supervision and direction also all moneys for the relief of the poor may be expended.

## AUDITOR AND COMPTROLLER.

The auditor and comptroller of the District submits detailed statements and explanations of the receipts and expenditures of the government of the District for the fiscal year ending June 30, 1879, with valuable suggestions and recommendations on other subjects connected with its financial management.

## COLLECTOR OF TAXES.

The collector reports the total collections by his office during the fiscal year ending June 30, 1879, at \$1,610,327.62.

He also comments on the large amount of uncollected, general, and personal taxes from January 1, 1845, to June 30, 1879, a considerable portion of which, however, is disputed by the parties against whom it is assessed. The Baltimore and Ohio Railroad is the most notable of these delinquents, and is charged with about \$75,000 arrearages of taxes, not including interest and cost of advertising for sale. A number of the banks in the District which claim immunity from personal assessment are also largely represented in this delinquent account. He recommends that measures be taken looking to an adjustment of this matter.

He calls attention to the impracticability of enforcing collections of the dog tax under the present law, since the decision of the judge of the police court, that offenders under it were not liable to criminal action; and to the necessity of further legislation to make the law effective, as the collections under it have been greatly decreased by the influence of that decision.

## TREASURER AND ASSESSOR.

The treasurer and assessor reports his receipts and deposits in the Treasury of the United States for the fiscal year ending June 30, 1879, the assessed value of property in the District, and the amount of tax chargeable against the same.

He refers to the difficulty of collecting the personal tax under the present law, and some of the methods resorted to in evading its payment, and in this connection comments adversely on the taxation of loans upon real estate and its effect in restricting the introduction of foreign capital.

He also refers to the enormous amount of property assessed to educational and benevolent associations, &c., upon which no tax is paid, and the desirability of legislation to make a more equal distribution of the burden of taxation and to more clearly define the law respecting exemptions of church and school property.

Referring to the large amount of riparian property evading taxation, he advises that the question of its ownership be settled by Congress, and advances certain suggestions respecting a new assessment of property in the District.

## FIRE DEPARTMENT.

The commissioners of the fire department make a showing at length of the transactions, condition, and needs of their department. They renew their recommendation that provision be made for disabled firemen, and give reasons in support of it that are worthy of attentive consideration.

We join in their reference to the efficiency of their department, whose reputation is a matter of just pride to our citizens.

## THE ATTORNEY.

The attorney recites briefly the important causes acted on by his office and the condition of some still unsettled. He reports the whole number of civil cases finally disposed of since last report at 72 and the commencement of 21 new ones, and that 260 civil cases of various natures are now pending. He reports the disposal of 58 criminal cases, and that 69 are pending. Also that 3,524 cases were tried in the police court.

He refers to the hardship to the District and its citizens caused by the act of February 25, 1879, in the matter of appeals to the United States Supreme Court, and suggests that the act be amended so as to permit the District to take up to the court one case of a special class, whatever may be the amount involved.

## CORONER.

The coroner reports the number of deaths certified by him during the year ending June 30, 1879. He renews his recommendation that a coroner's jury hereafter consist of six citizens, to be paid \$2 for each case in which they are summoned, and refers to the present need of a morgue.

## HEALTH OFFICER.

The health officer reports the transactions of his office for the past year, including the abatement of nuisances, the inspection of articles of food, the removal of garbage, night soil, and dead animals, burial at the public expense, the registry of births, deaths, and marriages, and the treatment of other matters falling under his supervision. He makes many important suggestions respecting the administration of his department, and subjects connected therewith, which merit the attention of Congress.

## POLICE.

The superintendent of police recommends an increase of his department, and among the reasons given therefor is the fact that no enlargement of the force under his charge has been authorized since its establishment in 1866, although there has been an extraordinary increase in the population and property it is expected to protect. He recounts the excellent results from the increase in the number of mounted police and from the establishment of the ambulance service. He refers to the desirability of erecting buildings for station-houses instead of those rented at present; to the necessity for increasing the capacity of the Boys' Reform School, the establishment of an institution with a like object for girls; to the founding of a free city hospital and dispensary; to the necessity for a better system for the control of tramps, and recom-



mends that provision be made for the care of infirm and disabled policemen, to all of which the Commissioners ask the considerate attention of Congress.

INSPECTOR OF BUILDINGS.

The inspector of buildings reports having issued 1,981 permits for the erection and repairs of buildings, &c., including a cost of \$1,735,715, \$1,306,625 of which was for new brick buildings.

SUPERINTENDENT OF PROPERTY.

The superintendent of property submits a statement of the purchase and distribution of supplies for the various departments of the District.

Very respectfully,

S. L. PHELPS,  
J. DENT,  
W. J. TWINING,  
(Major of Engineers,)

Commissioners of the District of Columbia.

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A.—REPORT OF THE SECRETARY.

OFFICE OF THE COMMISSIONERS  
OF THE DISTRICT OF COLUMBIA,  
Washington, October 1, 1879.

GENTLEMEN: I have the honor to submit herewith copy of orders passed by the Commissioners during the fiscal year ending June 30, 1879.

Respectfully,

WILLIAM TINDALL,  
Secretary.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

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OFFICE OF THE COMMISSIONERS  
OF THE DISTRICT OF COLUMBIA,  
Washington, July 1, 1878.

*Ordered*, That the major of police be directed to take charge of the records, and conduct the affairs of the late board of police and of the police force until otherwise ordered.

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JULY 3, 1878.

*Ordered*, That each officer of the District of Columbia, who is required to give bond for the proper discharge of his official duties, shall at once execute a new bond for such purpose, and submit it to the board for its approval.

That the record of letters received and letters sent of the office of the Board of Commissioners shall be part of the minutes of the board.

That the offices of the District government be closed at three o'clock to-day and during the entire day to-morrow, the 4th of July.



JULY 8, 1878.

*Ordered*, That the engineer commissioner be requested to cause to be abated the nuisance created by the chariot company's horses at both termini of said company's route.

JULY 9, 1878.

*Ordered*, That official communications of the board shall be signed by the president, by order of the board; or by the secretary, when so directed by the board.

§ That the major of police, superintendent of assessments and taxes, and assistant attorney shall constitute a board to examine and report respecting the merits of applications for liquor license.

§ That so much of the center of Vermont avenue toward the southwest, from the inside line of the footwalk upon the south side of I street north, as may be necessary for six carriages, and no more, arranged in two close lines, be designated as the location for a hack-stand. No hack shall be allowed to stand in any other locality in the vicinity of the stand herein authorized.

§ That the following organization, recommended by Commissioner Twining, is approved, and the affairs of the departments represented therein placed under the special charge of said Commissioner, to whom all matters connected with said departments will be referred for investigation and report:

Assistant.		
1 chief clerk	per annum	\$1,760 00
1 computing engineer	do	2,400 00
1 leveler	do	1,600 00
1 leveler	do	780 00
1 leveler	per diem	4 00
1 rodman	per annum	780 00
1 axman	per diem	2 00
1 draughtsman	per annum	1,000 00
1 inspector	do	1,440 00
1 inspector	per diem	4 00
1 inspector	do	3 00
2 overseers	each per annum	1,200 00
1 inspector	do	960 00
1 inspector	per diem	4 00
1 clerk	do	3 20
1 clerk	do	3 00
1 messenger	per annum	600 00
1 driver	do	600 00

## SEWER PERMITS.

1 superintendent	per annum	1,400 00
1 sewer tapper	do	1,000 00

## WORK OF REPAIRS IN WASHINGTON AND DISTRICT SEWERS.

1 superintendent	per annum	2,000 00
1 clerk	do	1,900 00

## WORK OF REPAIRS IN GEORGETOWN.

1 superintendent	per annum	\$900 00
Labor rolls to average \$500 per month.		

## WORK OF REPAIRS IN THE COUNTY.

3 superintendents	each per annum	\$900 00
Labor rolls to average \$700 per month.		

# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 19

## REVISION OF SPECIAL ASSESSMENTS.

2 clerks .....	each per annum..	\$1,200 00
1 clerk .....	do .....	1,440 00
4 clerks .....	each per diem....	3 00

## STREET LAMPS AND GAS.

1 superintendent.....	per annum..	\$200 00
4 lamplighters.....	do .....	480 00
1 lamplighter.....	do .....	120 00

## SURVEYOR'S OFFICE.

1 surveyor .....	Fees.	
2 clerks .....	each per annum..	\$1,200 00

## PARKING COMMISSION.

3 commissioners.....	None.
Labor rolls to average \$1,200 per month.	

## WATER REGISTRAR'S OFFICE.

To remain as now organized for laying and repairing mains, water services, &c., and for the assessment of water rates and taxes.

The markets, property, and public buildings of the District of Columbia will be subject to the supervision and control of the engineer until otherwise ordered.

JULY 10, 1878.

*Ordered,* That the affairs of the public schools, and the charities and corrections departments are placed under the special charge of Commissioner Dent, to whom all matters in connection with those departments will be referred for investigation and report.

§ That the affairs of the fire, police, and health departments are placed under the special charge of the president of this board, to whom all matters in connection with those departments will be referred for investigation and report.

§ That the judge of the police court of the District of Columbia be notified that the building on the northeast corner of Sixth and D streets northwest, in this city, is now ready for occupancy by said court, and that he will at once proceed to remove thereto.

§ That the police shall keep the vicinity of said building at all times free from loungers, collections of people, and other causes of annoyance.

§ That the attorney give the proper notice to the owner of the building on C street, between Fourth-and-a-half and Sixth streets northwest, now occupied by the police court, that said property will be vacated and the rent therefor cease to be paid by the District on the expiration of the present month.

JULY 11, 1878.

*Ordered,* That signs erected contrary to the building regulations and all boxes and stands erected without permission shall be removed as soon as practicable, and that a list of all cases where permits for such purposes have been given be submitted to this board by Commissioner Twining, who is charged with the execution of this order.

§ That the board constituted to examine and report respecting the merits of applications for liquor licenses shall meet every Thursday, at 2 o'clock p. m., at the headquarters of the Metropolitan police.

JULY 13, 1878.

*Ordered,* That the semi-monthly payments on account of salaries of officers and employés of the District government, authorized by order of April 11, 1878, to be made on application to the Commissioners, be discontinued after the present month.

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JULY 16, 1878.

*Ordered,* That by virtue of the authority vested in the Commissioners by the "act providing a permanent form of government for the District of Columbia," approved June 11, 1878, the inspectors of flour for Georgetown are hereby removed, and the two offices of inspector of flour for Georgetown consolidated into one office of inspector of flour for Georgetown.

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JULY 17, 1878.

*Ordered,* That a board of appraisement, consisting of Lieut. R. L. Hoxie, John A. Partridge, surveyor, and William Dixon, assessor, is appointed to confer with the claimants in the matter of the condemnation of ground for a gravel pit at the head of Slash Run sewer, at Eighteenth street northwest, view the ground, and recommend an equitable compensation in the premises.

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JULY 19, 1878.

*Ordered,* That no officer or employé is authorized to cause any advertisement to be published in any newspaper in the District of Columbia except upon written authority granted by the Commissioners, and no bills for advertisement will be paid unless accompanied by a duly authenticated copy of such authority.

§ That as a general rule the street railroad companies in the District may pave the horse-tracks of their roads with small cobble-stones of nearly uniform size, but the pavement between the inside rails shall conform to that of the contiguous street.

§ That where permits are used for vaults, awnings, &c., the owners shall be notified that the permits do not authorize interference with lamps, sewers, trees, or other improvements; and that in cases of vaults, there shall be at least four feet clear between the curb and such vaults, exclusive of the width of curb and wall of vault.

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JULY 20, 1878.

*Ordered,* That when complaints and information of nuisances, which have been received through the health officer or other source, shall have been acted upon by the officer to whom they have been referred, they will be returned to the Commissioners by such officers as promptly as practicable, with a statement of the proceedings taken by him in the premises.

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JULY 31, 1878.

*Ordered,* That no wagon or other vehicle belonging to venders in the Center Market, or used in connection with sales in or about that market, shall be allowed to stand on Seventh street below Pennsylvania avenue in the vicinity of the market. All market wagons must be

parked upon B street, between Ninth street and Seventh street northwest.

That by virtue of the authority vested in the Commissioners of the District of Columbia, by an act of Congress, entitled "An act providing a permanent form of government for the District of Columbia," approved June 11, 1878, the two sealers of weights and measures for the city of Washington are removed from said offices, and that the two offices of sealer of weights and measures for the city of Washington are consolidated into one office of sealer of weights and measures for the city of Washington.

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JULY 31, 1878.

*Ordered*, That the trustees of public schools be divided into three classes, as follows:

The first class to serve for one year.

The second class to serve for two years.

The third class to serve for three years.

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AUGUST 1, 1878.

*Ordered*, That the law requiring advertisements for proposals to do work by contract shall be construed to refer only to contracts for improvement or repair on streets, avenues, highways, alleys, gutters, sewers, and all work of like nature.

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AUGUST 2, 1878.

*Ordered*, That the recording of all contracts made and entered into by the Commissioners shall be done by and under the direction of Commissioner Twining.

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AUGUST 3, 1878.

*Ordered*, That Lieut. R. L. Hoxie, the auditor and comptroller, and the water registrar are appointed a committee to open proposals for contracts appertaining to the engineer department of the District.

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OFFICE OF THE COMMISSIONERS  
OF THE DISTRICT OF COLUMBIA,  
Washington, August 5, 1878.

Whereas the act of Congress entitled "An act to authorize the Commissioners of the District of Columbia to make and enforce regulations relative to the sale of coal, and also building regulations," approved June 14, 1878, provides "that the Commissioners of the District of Columbia be, and they hereby are, authorized and directed to make and enforce such rules and regulations relative to the sale of coal in the District of Columbia as shall insure full weight to purchasers of coal:" It is

*Ordered*, That the legal standard ton of coal in the District of Columbia shall be two thousand two hundred and forty pounds.

That every person licensed to sell coal in the District of Columbia shall keep at any yard or other place where coal is stored and sold by him a suitable set of scales, which, before use, shall have been tested and found correct by a sealer of weights and measures, and shall be

sufficient to weigh a load of at least eleven hundred and twenty pounds of coal at one time. The sealers of weights and measures shall, as often as once a month, at irregular intervals, carefully examine, try, prove, and seal all scales used for weighing coal, and report the result to the Commissioners of the District of Columbia. For each load of coal weighed for sale upon scales not so examined, tried, proved, and sealed, the dealer selling the same shall forfeit and pay not less than ten dollars.

That it shall be the duty of every seller of coal to send with each and every load of coal sold by him a card or ticket, which shall indicate on the face, in plain characters, the seller's name, the date, and weight of coal contained in the cart or other vehicle in which it is being transported, and the weight of such cart or vehicle. Any vender of coal violating such provision, or being found selling or delivering any load of coal without such card or ticket, shall be liable to a fine of not less than five dollars nor more than ten dollars for every such violation. It shall be the duty of the sealers of weights and measures, and of police officers, from time to time, and whenever they suspect that the quantity of coal being transported for sale will not correspond with the amount indicated on the card or ticket aforesaid, to cause the said load of coal to be weighed upon any lawful scale most accessible for that purpose; and if, upon the weighing thereof, it shall be found that such load of coal is less than the net amount indicated upon such card or ticket, they shall so report, and the driver, owner, or agent furnishing such load of coal shall be liable to, and shall forfeit and pay to the District of Columbia, a fine of not less than ten dollars nor more than fifty dollars for each and every offense. The sealers of weights and measures shall be entitled to receive for any coal they may be called upon to weigh a fee of ten cents per load, payable by the seller of such coal, unless, upon weighing such coal, it shall be found that the amount indicated on said card or ticket is correct, or so nearly correct as not to indicate any evidence of fraud, when the driver or owner of said coal shall not be liable to any expense or fee for reweighing it.

That if any person owning or keeping a scale for weighing coal for sale, or any other purpose, shall refuse to allow the use of such scale in weighing such coal, or hinder any officer therein, he shall be liable to a fine of not less than ten dollars nor more than twenty dollars for every such violation.

One-half of all fines collected under these rules shall go to the "police fund" and the other half to the District of Columbia.

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AUGUST 7, 1878.

*Ordered*, That the board of fire commissioners of the District of Columbia is hereby reduced to three persons.

*Ordered*, That the office of fire commissioner "to be appointed by the Secretary of the Interior" is hereby abolished.

That the present fire commissioners are hereby removed.

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AUGUST 9, 1878.

*Ordered*, That the offices of sealer of weights and measures for the city of Washington and sealer of weights and measures for the city of Georgetown are consolidated into one office of sealer of weights and measures for the District of Columbia.

AUGUST 10, 1878.

*Ordered*, That the fee of the sealer of weights and measures of the District of Columbia shall not exceed fifty cents monthly for each scale examined and sealed as required under the order of the 5th instant respecting the sale of coal.

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AUGUST 14, 1878.

*Ordered*, That so much of the order of the Commissioners, dated July 19, 1875, respecting the districts of inspectors and measurers of wood, as consolidated the first and second canal districts with Rock Creek district, is annulled; and the Rock Creek district, as defined in the act of the late corporation of Washington, approved June 3, 1853, is consolidated with the Georgetown district, under the name of Rock Creek district.

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AUGUST 15, 1878.

*Ordered*, That the offices of inspector and measurer of wood for the first and second canal districts are hereby consolidated with the like office for Potomac district, under the name of inspector and measurer of wood for Potomac district.

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AUGUST 17, 1878.

*Ordered*, That warrants for disbursements under the Commissioners of the District of Columbia shall be signed by the president, or the president *pro tempore*, of the Board of Commissioners of said District.

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AUGUST 22, 1878.

*Ordered*, That hereafter propositions for renting or leasing buildings or rooms for school purposes will be entertained by the Commissioners only through and upon the recommendation of the board of trustees of public schools.

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AUGUST 27, 1878.

*Ordered*, That alley assessments for special improvement shall be made on the same basis as other special improvements, and shall be adjusted by the frontage on the alleys.

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AUGUST 29, 1878.

*Ordered*, That parties selling coal by measure, or otherwise, in quantities not exceeding one hundred pounds at a time, shall not be required to keep scales, as required in the order of the 5th instant regulating the sale of coal.

§ That nothing in the order of the 10th instant shall be construed to interfere with the semi-annual examination and sealing of scales of coal dealers by the sealer of weights and measures, or the right of that officer to the fee prescribed by law for that duty. But no fee for more than one examination shall be charged in each month, except where it is necessary for said officer to re-examine and seal a scale during any month in which it has previously been adjusted, when he may charge the usual fee of fifty cents for each such re-examination.

SEPTEMBER 2, 1878.

*Ordered*, That by virtue of the authority vested in the Commissioners of the District of Columbia by the act of Congress approved June 20, 1878, entitled "An act making appropriations for sundry civil expenses of the government for the fiscal year ending June 30, 1879, and for other purposes," the salaries to be paid to the officers, privates, and employés of the Metropolitan police force, from and after September 1, 1878, shall be as follows:

Major and superintendent .....	per annum..	\$2,610 00
Captain .....	do.....	1,800 00
Lieutenants .....	per month..	100 00
Sergeants .....	do.....	95 00
One clerk to the major, and charged with care of stolen and abandoned property .....	do.....	150 00
One clerk .....	do.....	125 00
Privates, one year's service .....	do.....	70 00
Privates, two, three, four, and five years' service .....	do.....	79 00
Privates, six, seven, eight, nine, and ten years' service .....	do.....	83 00
Privates, eleven, twelve, thirteen, fourteen, and fifteen years' service .....	do.....	88 00
Privates, all over fifteen years' service .....	do.....	90 00
Detectives .....	do.....	110 00
Station-keepers .....	do.....	43 00
Laborers .....	do.....	35 00
Telegraph operators .....	do.....	65 00
Three police surgeons, each .....	do.....	37 50
One messenger .....	do.....	75 00
One messenger .....	do.....	30 00

All mounted men shall have the same allowance as heretofore.

SEPTEMBER 3, 1878.

*Ordered*, That in the transportation of stone, earth, the products of coal-tar, or asphalt, or any other materials, the carts or vehicles used shall be of such construction as will prevent the falling or leaking of any refuse upon any street, avenue, or alley.

The police of the District is charged with the enforcement of this order, under the provisions of the second section of the act of the legislative assembly of said district approved June 20, 1872, entitled "An act to cause proper distances to be maintained between carriages, carts, and wagons while in motion."

SEPTEMBER 10, 1878.

*Ordered*, That the contractor for cleaning Tiber sewer be suspended from the performance of this work, and that Robert H. Ryan be placed upon the work, to complete it in accordance with the terms of contract No. 70, N. S.

That the railing around the parking on New York avenue be removed.

That the rate to be paid to the Georgetown Gaslight Company is fixed at \$2.25 per 1,000 feet, and that the regulation reducing burners from six to five feet is hereby rescinded.

That eighteen additional Metropolitan police officers be mounted, at the usual allowance of \$20 per man per month. The major of police shall designate the officers for this service.

That the salary of the attorney in and for the District of Columbia be fixed at \$5,000 for the current fiscal year.

SEPTEMBER 11, 1878.

*Ordered*, That the treasurer of the District of Columbia, the president of the board of fire commissioners, and George A. Bohrer, of the board of assessors, are appointed a committee to arrange for the purchase of a lot near the Washington Circle and one on Capitol Hill reported suitable for the purposes of the hook and ladder service of the fire department. No lot will be purchased for which the price asked is not very moderate, nor where the property owners about the locality object to the use of the lot for fire-department purposes.

SEPTEMBER 23, 1878.

*Ordered*, That in the matter of applications for the occupation of corner buildings as licensed liquor houses, the principal front shall be regarded the legal front of such buildings that have no side entrance.

That acting sergeants of the metropolitan police of this district shall receive compensation at the highest rate paid to privates, commencing the first instant.

SEPTEMBER 25, 1878.

*Ordered*, That hereafter only one voucher of each account on which payment is made by the Commissioners shall be certified by a majority of the Commissioners.

SEPTEMBER 30, 1878.

*Ordered*, That station-keepers hereafter appointed shall have the qualifications necessary and be eligible for appointment as privates of the metropolitan police of the District of Columbia.

That the following form of drawback certificate be adopted, viz :

## DRAWBACK CERTIFICATE.

No. —.] OFFICE OF THE COMMISSIONERS OF THE DISTRICT OF COLUMBIA,  
Washington, D. C., ———, 187—.

This certifies that the assessment for which lien certificate No. —, issued by the board of public works, for non-payment of assessment for special improvements on lot —, in square — fronting on —, for the sum of — dollars, bearing date of —, has been revised and corrected and reduced to the sum of — dollars, by authority of the act of Congress approved June 19, 1878.

This certificate for the sum of — dollars, is receivable in payment of assessments for special improvements, and redeemable in the manner prescribed for the redemption and purchase of certificates, as provided by an act of the legislative assembly of May 29, 1873, entitled "An act for extending the time of payment of special assessments, and for other purposes," after the provisions for the purchase and redemption of certificates named in said act shall have been fully carried out.

Transfers must be made on the back of this certificate, signed by the party to whom issued, his authorized attorney, or personal representative, in presence of two witnesses.

By order of the Commissioners.

To ———, the holder of lien certificate No. —, above described.

[On the back of the foregoing.]

For value received I hereby transfer to ——— the within certificate.

Witnesses:

———  
———



## 26 REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA.

That the following form of notice of revision of assessments be adopted:

### NOTICE OF REVISION OF ASSESSMENTS.

OFFICE OF THE COMMISSIONERS OF THE DISTRICT OF COLUMBIA,  
Washington, D. C., ———, 187—.

By authority of the act of Congress approved June 19, 1878, the assessment for which lien certificate No. — issued by the board of public works for non-payment of assessment for special improvement on lot No. — in square —, fronting on —, for the sum of — dollars, bearing date of —, on interest at ten per cent. per annum, has been revised and corrected, and reduced to — dollars.

The corrected items of charges and drawbacks are as follows:

The payment of said sum, with the interest from the date of said certificate, will discharge said property from the lien.

By order of the Commissioners of the District.

To ———.

*Owner or Attorney of said Lot above Described.*

That in the matter of repairs to bituminous pavements, two proposals under different names shall not be received from one set of works; and to carry out this order bidders will be required to specify the machinery in their possession and its locality at the time their proposals are made.

OCTOBER 2, 1878.

*Ordered*, That Francis Miller, assistant attorney for the District of Columbia, is hereby, at his own request, relieved from duty as a member of the board for the examination of applications for liquor licenses, and that Thomas C. Cox, water registrar, be appointed in his stead.

That pursuant to the recommendation of the scaler of weights and measures to reduce the number of inspections of coal dealers' scales, such inspections will hereafter be made only once every two months.

OFFICE OF THE COMMISSIONERS  
OF THE DISTRICT OF COLUMBIA,  
Washington, D. C., August 23, 1878.

Whereas, the act of Congress approved June 14, 1878, entitled "An act to authorize the Commissioners of the District of Columbia to make and enforce regulations relative to the sale of coal and also building regulations," prescribes that the Commissioners of the District of Columbia are authorized and directed to make and enforce such building regulations for the said District as they may deem advisable; and that such rules and regulations, made as provided, shall have the same force and effect within the district of Columbia as if enacted by Congress; it is therefore

*Ordered*, That the following amended regulations be in force from and after this date.

S. L. PHELPS,  
J. DENT,  
W. J. TWINING,  
(Major of Engineers,)

*Commissioners of the District of Columbia.*

### BUILDING REGULATIONS OF THE DISTRICT OF COLUMBIA.

SECTION 1. These building regulations shall be in force in the District of Columbia; and all walls, structures, and buildings, or parts thereof,

except bridges, quays, wharves, or buildings belonging to the Government of the United States, within said district, shall be built, altered, or repaired, in conformity therewith; but any privilege obtained under them shall be held subject to the right of the Government of the United States or the District of Columbia to modify or abrogate it, whenever the public interests shall so require.

SEC. 2. The technical terms used in these regulations shall have the significations given them respectively in this section, as follows:

*Building limits.*—The limits of the District of Columbia.

*Fire limits.*—All that portion of the District of Columbia known as the city of Washington; and that portion of the city of Georgetown bounded on the north by road and Eighth streets; on the west by the boundary line of the city of Georgetown; on the south by the Potomac River, and on east by the city of Washington; within which it shall not be lawful to erect, construct, enlarge, alter, repair, or remove any wooden building except as hereinafter prescribed.

*Cellar.*—That portion of a building below the first floor of joist, if partially or entirely below the level of the adjoining parking, street, or ground, and not suitable for habitation.

*Basement.*—A story partially below the level of the adjoining street, and below the first floor of joist, suitable for habitation.

*Foundation wall.*—That portion of any exterior wall below the level of the adjoining earth or pavement; and that portion of any partition or party wall below the level of the basement or cellar floor.

*External wall.*—Every outer wall or vertical inclosure of a building, other than a party wall.

*Party wall.*—Every wall used or built as a separation of two buildings.

*Partition wall.*—Any interior wall of non-conbustible material in a building.

*Partition.*—Any interior division constructed of iron, glass, wood, lath and plaster, or any combination of these materials.

*First story.*—The story, the floor of which is on or first above the level of the sidewalk or adjoining ground. The other stories shall be numbered in regular succession counting upward.

*Attic story.*—A story situated either in whole or in part in the roof.

*Mansard roof.*—A roof formed with an upper and under set of rafters, the upper set more inclined to the horizon than the lower set.

*Wooden building.*—Any building of which any external or party wall is constructed in whole or in part of wood.

*Tower projection.*—Any projection for ornamental door entrance, or right-angled projection designed exclusively for ornamental windows or for buttresses.

*Show window.*—Any store window in which goods are displayed for sale.

*Bay window.*—Any projection for a window other than a tower projection or show window.

*Tenement house.*—Any building or portion thereof which is occupied, or is intended for occupation, as the residence of more than three families living independently of one another, and doing their cooking upon the premises.

*Lodging house.*—Any building or portion thereof in which persons are lodged for hire for less than week at one time.

*Shed.*—An open or closed board structure.

*Building owner.*—The owner of the premises on which work is being done.

*Adjoining owner.*—The owner of premises adjoining those on which work is being done.

SEC. 3. The executive authority of the District of Columbia shall appoint an inspector of buildings for said district, who shall be an architect, and shall have been engaged in business as such, for at least seven years.

The inspector of buildings shall, before he enters upon the duties of his office, take and subscribe an oath or affirmation, before an officer duly qualified to administer the same, that he will faithfully perform the duties of his office, and that he has been engaged in business as an architect for seven years. Said oath or affirmation shall be filed in the office of the executive authority of the District of Columbia.

He shall, also, before entering upon the duties of his office, execute a bond to the District of Columbia in the sum of \$10,000, with three sureties, to be approved by the executive authority of said District, conditioned for the faithful performance of the duties of said office, which shall be for the benefit of all parties aggrieved by his acts or neglect, and shall be filed with his oath.

He shall have for his services a salary of \$2,400 per annum. He shall, under supervision of the executive authority, be charged with the survey and inspection of buildings and the enforcement of these regulations, and with such other duties in respect thereto as the executive authority of the District may from time to time assign to him; and while holding this office he shall not engage or be interested in the business of an architect or builder in said District, except in special cases, and then only in accordance with permission in writing given by said executive authority, and specifying in each case the extent and nature of such engagement or interest.

It shall be his duty to sign and issue all permits, certificates, and notices under these regulations; to keep on file all applications and notices received; to keep the record of all violations of these regulations, and all matters relative thereto, and report them, when necessary, to the executive authority of the District; to keep blanks for permits, certificates, notices, applications, and complaints; to make an annual report of the operations of his office, and such other reports as may be required, to the executive authority of the District of Columbia.

He shall examine all buildings in course of erection, alteration, or repair, as often as necessary; shall see that the work be done in accordance with the requirements of these regulations; that the materials used are suitable for the purpose, and that the work is done in a substantial manner, and is of sufficient strength and solidity to answer the purpose for which it is designed.

He shall examine any building supposed or reported to be in a dangerous or defective condition, and make a record of such examination; of the location of the building; the purposes for which it is used, and the names of the owner and lessee.

If, after examination, he shall deem any structure or building dangerous to the occupants in life or limb, he shall serve upon the premises a notice requiring a vacation of said structure or building, and also serve, or cause to be served, a notice in writing upon the owner, agent, or any party having interest in the said structure, requiring the same to be made safe and secure, or removed, as he may deem necessary. But, upon depositing thirty dollars to cover fees of examining commission in case the decision should be adverse to the appellant, the interested parties may appeal within forty-eight hours, in writing, to the executive authority of the District, who shall appoint a commission of two disin-

interested and competent builders and one architect, residents of the city (who shall be paid for their services the sum of ten dollars each, upon the certificate of the inspector), to determine the question at issue. In case of a decision adverse to the appellant, and the refusal or neglect of the owner, or other interested party, to comply therewith, the inspector of buildings may cause such unsafe or dangerous structure to be taken down, or otherwise made safe, and the cost and charges shall become a lien upon said estate, to be collected according to law, as a debt due to the District of Columbia.

He shall, after examination, serve a written notice upon the owner, agent, or other party interested in any building regarded by him as defective, setting forth in detail the necessary repairs; and if the owner or owners, agent or agents, or other parties interested, shall refuse or neglect to have the repairs as stated made, or shall not have actually commenced to make the same within thirty days from the date of notice thereof, then the occupant or occupants of such building shall not be liable for the payment of rent until said repairs shall have been made, and a certificate to that effect furnished by the inspector of buildings.

He shall examine any building when application shall be made for a permit to raise, enlarge, alter, or build upon it, and make a record of its condition.

He shall examine whether any building conforms to law, and give a certificate of its condition, upon a written application therefor.

He shall have supervision of the erection of *all* heating apparatus.

He shall make investigation in all cases of fire, and report respecting the probable origin thereof.

He shall examine and approve the plans of any house, building, or portion thereof intended to be used, occupied, rented, or leased as a hotel, tenement, or lodging-house before issuing a permit.

He shall carefully examine the plans and specifications of any building to be used in whole or part for public assemblies, and ascertain that they conform to the requirements of these regulations, before giving a permit for the erection of such building; and shall file a copy of said plans and specifications in his office.

He shall, whenever he may deem necessary, serve written or printed notice on the owner, lessee, or manager of any such building or part of building already erected, or hereafter built, directing any act or thing to be done in or about the arrangements thereof, and the appliances connected therewith, so as to afford the greatest possible security to the public, and good ventilation; subject to appeal and determination by a commission, appointed as in the matter of dangerous and defective structures.

He shall inspect every dwelling-house now erected in the cities of Washington and Georgetown, occupied by two or more families, or any of the floors above the second floor from the level of the street, and any building now erected and occupied as a hotel, boarding, or lodging house, factory, mill or manufactory, or for offices or workshops, in which persons are employed in any of the stories above the second story; and, if in his opinion such building is not provided with proper facilities for the escape of persons in case of fire, he shall immediately serve a notice in writing upon the owner or owners, agent, or other party or parties having an interest in said building, requiring the necessary additional facilities to be provided without delay. Said notice, also, shall be subject to appeal and determination by a commission, appointed as in the matter of dangerous and defective structures, which shall specify the requisite changes or alterations, if any, to be made.

He may require the submission of plans and specifications of proposed improvements with the application for permit therefor.

He shall have full power to require the *intent* of these regulations to be observed in all matters affecting structures, not specifically set forth herein; but he shall have no discretionary power to modify any of these regulations.

SEC. 4. The executive authority of the District may appoint deputy inspectors of buildings, who shall, whenever directed by said executive authority, perform any or all the duties of the office of inspector of buildings.

SEC. 5. The inspector of buildings and deputy inspectors of buildings shall, as far as may be necessary for the performance of their duties, have the right to enter any building or premises within the aforesaid building limits upon showing their badge of office; and any person who shall interfere with them in the performance of such duties shall be liable to a fine of not less than ten nor more than forty dollars for each offense.

SEC. 6. No building or other structure, awning, sign, engine, steam-boiler, furnace, heating-range, bay window, show window, tower, or other projection shall be erected, nor any area, vault, cellar, basement, or excavation appurtenant to a building or other structure be made, nor alteration allowed in any such improvement, unless a permit for such alteration or improvement shall have been issued.

SEC. 7. Every excavation for a cellar, vault, area, or other purpose, upon or adjoining any lot, shall be protected by an inclosed bridge or tight fence.

Every cellar or basement of a dwelling shall have a bed of concrete, not less than two inches thick, spread over the entire bottom, or shall be paved with brick laid in cement.

Every building hereafter erected without cellar or basement shall have in the walls below floor level, in front and rear, not less than four ventilators, each not less than five by twelve inches.

SEC. 8. The foundation walls of every building must rest upon the solid ground, concrete, piles, planks, or other solid sub-structure, be built of brick, stone, or other hard and incombustible material, and of dimensions set forth in the following section. It shall be unlawful to erect or construct any rear, party, or division wall between two or more houses or structures upon wooden supports. The foundations of all walls erected hereafter shall be laid not less than two feet six inches below the surface of the ground. On terraced streets the foundation shall be laid at least one foot below the level of the curbing upon the street front, the inspector of buildings to determine the measurement; and in case of the removal of any terrace the walls shall be underpinned, so far as necessary in the opinion of the inspector of buildings.

Cellar or basement walls of buildings erected within reach of tide-water shall be built up to the level of spring tides, in cement mortar, and of a thickness to be determined in each case by the inspector of buildings, and the ground floors shall be water-tight, and in such manner as may be directed by said inspector.

SEC. 9. The walls of every building, with the exceptions hereinafter mentioned, shall be built of brick, stone, iron, or other hard and incombustible material. Every wall constructed of brick, stone, or other similar substance shall be properly bonded and solidly built with lime or cement mortar. External walls faced with stone shall have a backing of hard-brick work laid in cement mortar. The stone facing of a wall shall always be securely tied to the brick backing by suitable iron

clamps. Every fifth course of brick facing must be securely bonded by headers.

The thickness of the walls of any building hereafter erected or altered in height shall be as follows, to wit: In any building not more than thirty-five feet high and twenty-five feet or less in width, the cellar or foundation walls shall be not less than thirteen inches in thickness to the height of the first floor of joists, and thence the external and party walls not less than nine inches; for any building not exceeding thirty-five feet in height, but exceeding twenty-five feet in width, the external and party walls shall be not less than thirteen inches thick to the square thereof; in any building exceeding thirty-five but not exceeding forty-five feet in height, the cellar or foundation walls shall not be less than eighteen inches in thickness, and the front and rear walls above not less than thirteen inches in thickness, and the party walls not less than thirteen inches thick to height of second-story floor, and from thence up nine inches thick, provided the nine-inch wall does not exceed twenty-four feet in height; in any building exceeding forty-five but not exceeding fifty-five feet in height, the foundation or cellar walls shall not be less than eighteen inches in thickness, the party walls not less than thirteen inches, and the other walls not less than eighteen inches to the height of the first story, and thirteen inches for the remainder of the height. The walls of any subcellars shall be not less than eighteen inches thick. Whenever any builder, owner, or contractor may construct or erect any building to a greater height than above specified, or for other purposes than a dwelling, the increased thickness of the walls shall be determined by the inspector of buildings; but in any case where the proposed building is to be used for a storehouse or similar purpose, the party or division walls shall not be less than thirteen inches for the full height thereof. The bottom course for foundation wall resting upon the ground shall be at least nine inches wider than the thickness of the wall. The height of all walls to be computed from the curb level.

If any walls are laid with irregular rubble-work, the thickness shall be one-fourth greater than required in other cases. Thin ashlar facing shall not be counted in determining the thickness of walls. In any building hereafter erected on a street corner for the storage of heavy weights, the bearing wall, that is, the wall upon which the beams rest, shall be four inches thicker than is otherwise prescribed in these regulations.

The inclosing walls of a building must be brought up as nearly simultaneously as possible, and in no case shall the work on the side walls be ahead of the work on the front wall more than the height of one story.

Side, end, or party walls shall be anchored at each tier of beams, at intervals of not more than ten feet, with good, strong, wrought-iron anchors, one-half inch by one inch, well secured into side walls and well fastened to the side of the beams by not less than two wrought-iron nails at least one-fourth of an inch in diameter, so as to form continuous ties across the building on each floor.

Party walls shall be brought up through the roof covering, and shall be built up at least six inches above the flat of the roof of the highest building of which such wall forms a part for the full extent of the flat, and shall be covered by brick laid on slate, or by a coping of stone or metal, and so as effectually to prevent the connection of the roofing of any two or more houses or buildings.

Party walls in adjoining buildings hereafter erected shall be constructed so that the floor timbers from opposite sides of said walls shall have at

least four inches bearing therein, and be separated by not less than four inches of solid brick-work.

No recess of any kind shall be made in any nine-inch party wall for any purpose whatever, nor shall any party wall be cut into more than four and one-half inches, unless the same shall be more than fourteen inches thick, nor shall the same be recessed continuously for any purpose whatever more than four and one-half inches.

The fourth section of the building regulations, No. 1, approved by President Washington October 17, 1791, is recognized as in force, and is as follows:

"That the person or persons appointed by the commissioners to superintend the buildings may enter on the land of any person to set out the foundation and regulate the walls to be built between party and party as to the breadth and thickness thereof, which foundation shall be laid equally upon the lands of the persons between whom such party walls are to be built, and shall be of the breadth and thickness determined by such person proper; and the first builder shall be reimbursed one moiety of the charge of such party wall, or so much thereof as the next builder shall have occasion to make use of, before such next builder shall in any way use or break into the wall. The charge or value thereof to be set by the person or persons so appointed by the commissioners."

*Provided*, That the maximum thickness laid upon the adjoining lot shall be nine inches in the cellar, and that the set-off shall be equal on both sides; and in all cases where a building is erected singly, and a party wall is constructed, the party line shall be carefully preserved by receding four and one-half inches from the front with that portion that extends over that line.

The building owner shall pay for one-half of an existing party wall, or for so much thereof as he shall use, whether said wall be cut or not, and the quantity or measurement of wall so used shall be computed by the inspector of buildings, unless the parties in interest agree upon some other person or persons for such purpose. The indemnity to the adjoining owner shall be paid by the building owner previous to cutting or in any manner using said wall at the then current price for similar work. The measuring fee shall be paid as hereinafter prescribed, and shall be paid in equal proportions by both parties to the persons selected.

The inspector of buildings shall, upon the application of any building owner or his authorized agent, examine any or all existing party or division walls, and, if deemed by said inspector to be defective, out of repair, or otherwise unfit for the purpose of new buildings about to be erected, such party or division wall shall be made good, repaired, or taken down by the building owner, as the decision may be, the cost and expense of which repair or removal, together with the expense of the new wall or walls to be erected in lieu thereof, shall be borne and paid exclusively by him; and he shall also make good all damages occasioned thereby to the adjoining owner or his premises: *Provided*, That these regulations shall not be construed to justify the owner in encroaching upon the premises of the adjoining owner beyond the party wall already built, or, in the case where no party wall has been built, more than nine inches, without having first obtained the written consent of the adjoining owner of the premises so to be encroached upon. But if, in such case, the building owner prefers to build an independent new wall of his own by the side of the old party wall, he shall be relieved from reimbursing the adjoining owner for former outlay in building the party wall, the thickness of new wall to be determined by the inspector of buildings in each and every case, consistent with these regulations.



Buildings hereafter erected or increased in height, except churches, shall not exceed a greater height than seventy-five feet to the square; except the additional height shall be constructed in a fire-proof manner, as herein named, to wit: All joists, beams, rafters, purlines, jack-rafters, plates, studs, ties, and arches shall be made of cast or wrought iron, or some other metal, stone, brick, cement, mortar, or other incombustible material, and covered with corrugated iron, sheet or cast iron, tin, copper, zinc, or other metal, or slate, stone, brick, cement, mortar, or other incombustible material.

No room intended for human habitation or sleeping shall have less than eight feet clear height.

SEC. 10. Chimneys shall be built of brick, stone, or other fire-proof non-conducting material, and in no case shall a chimney rest upon a flooring without a footing of masonry or iron, supported by iron bars having a secure bearing on masonry or iron at either end. Brick flues, without reference to the purpose for which they may be originally intended to be used, shall be smoothly plastered inside with good parging mortar, and on the outside between the ceiling, joists, and rafters. Brick flues not starting from the foundation walls shall be securely built into the brick-work of the walls to which they are hung, and shall be supported by courses of brick, corbeled out from the main wall by successive projection. Where the breast of a chimney projects more than nine inches it shall be started and built on the same line from the foundation, or where this is impracticable, it shall be secured in such manner as shall be determined by the inspector of buildings.

All flues shall be topped out at least four feet above the roof of the building or buildings to which they belong or adjoin, and all brick flues shall be smoothly plastered inside with mortar from top to bottom, and outside between the roofing and ceiling joists. The brick topping out of chimneys and flues shall not have more than four inches projection, unless covered by a cap of stone or iron properly secured. Hearths, fireplaces, or grates shall be laid upon trimmer arches of brick, turned the full length of the chimney breast, the centering of which must be struck by bricklayers on completion of the arch, or upon bars of iron supporting trimmer arch. No wooden joists, rafters, beams, girders, or other wood shall be built into any chimney or flue whatever; nor shall they, or wood-work of any kind, be placed at a less distance than two inches from the outside of the brick-work of any flue, nor shall any flue be built in any party or division wall, unless the back of the flue be nine inches thick. In no case shall a nail be driven into the masonry of any flue, nor shall any base, flooring, or roofing, or any other wood-work be placed against any flue until it shall be well plastered externally with proper material.

Metal flues or pipes of a single thickness, intended to convey heated air in any building hereafter to be altered or erected, shall have a thickness of not less than one inch of plaster Paris, or other non-conducting material, between them and any timber or wood-work adjoining the frame, or the pipes shall be doubled, that is, one inside another, at least one inch apart, and the space between them filled with non-conducting and non combustible material, unless built in stone or brick walls.

All flues for boilers and smelting furnaces shall be built of brick or metal of such size and height as may be determined on by the inspector of buildings.

No smoke-pipe in any building having wooden or combustible floors or ceilings shall enter any flue, unless it shall be at least twelve inches from either the floor or ceilings. Pipes passing through stud or wooden



partitions shall be guarded by a double collar of metal, giving at least two inches of air space, having holes for ventilation, or by other device equally secure, which shall be approved by the inspector of buildings. In any case where a furnace or boiler of any kind is used, the smoke-pipe must be placed at least two feet below beams or ceilings, unless said beams or ceilings are properly protected by shields or tin plates suspended above said smoke-pipe, with a sufficient space for the free circulation of air above and below said shield. The smoke-pipe shall in every case be at least eight inches from the beams or ceilings. The top of any furnace set in brick must be covered with brick, slate, or tin plate supported by iron bars, and so constructed as to be perfectly tight; said covering to be in addition to, and not less than six inches from, the ordinary covering to the hot-air chamber. If there is not height enough to build a furnace top at least four inches below the floors, beams, or ceilings, the floor beams must be trimmed around the furnace, and the covering, trimmers, and headers must be at least four inches from them. The top of any portable furnace, not set in brick, shall be at least one foot below the beams or ceilings, and shall have a shield of tin plate, made tight, suspended at least two inches below said beam or ceiling, and extending one foot beyond the top of the furnace on all sides.

Hot-air registers hereafter placed in the floor of any building shall have air spaces extending all around their register boxes, guarded by tin on the outside.

SEC. 11. Openings for doors and windows, except as otherwise herein provided, shall each have a good and sufficient arch of stone or brick, well built and keyed, with good and sufficient abutments, or lintels of stone or iron; and over wooden lintels, without regard to width, arches shall be turned. Over openings in which the lintel shall be less than the thickness of the wall to be supported, there shall be good timber lintels on the inside of the other lintels, which shall rest at each end not more than four inches on any wall, and shall have arches turned over the timber lintels.

No dwelling shall be constructed having windows on one side only. No bay window which shall extend more than three feet above the second floor from the street shall be constructed of wood.

SEC. 12. Openings of more than ten feet in width upon which walls rest shall be covered with iron beams or girders, which, if cast, shall have wrought-iron tie-rods of sufficient strength, well fastened at the ends of the beams or girders. All such beams shall have cast iron shoes on the upper side to answer for the skewback of a brick or cut-stone arch, which shall always be turned over the beams, and the arch shall in no case be less than twelve inches in height and the width of the wall to be supported. Cut stone or hard brick arches may be turned over any opening less than thirty feet in width, provided they have skewbacks of cut stone or cast or wrought iron, with which two wrought-iron bars or tension-rods of sufficient strength shall be properly secured. In cases where the abutments of an arch are not of sufficient size to resist its thrust, the rise of the arch shall be determined by the inspector of buildings. All lintels of stone fronts returned over a corner opening shall be of iron of the full breadth of the wall to be supported, and shall be made safe, as above detailed. Any support at the corner shall be of brick, cut stone, or iron; and if of iron, it shall be in the shape of a double column—that is, an outer and inner column; the inner column shall be of sufficient strength to sustain safely the whole weight, and the outer column shall be made of sufficient size to allow a space of at least one inch between it and the inner column, which shall be solidly

filled with plaster of Paris or other non-conducting material equally secure.

All floor timbers shall extend from wall to wall, except where brick partitions intervene; and ends of beams, rafters, and joists entering brick walls shall have a bearing of at least three and one-half inches therein, and shall be cut on a splay of three inches in their width. Wells for stair or other openings shall be framed.

Notice of intention to cut a doorway through any party wall separating buildings shall be filed with the inspector of buildings, who shall decide what safeguards are necessary for closing said doorway when not used.

SEC. 13. Every building or addition hereafter erected shall be roofed with non-combustible material. Every roof of combustible material which shall become impaired to one-third of its original value shall be replaced by the owners with non-combustible material. Each roof shall have a scuttle, not less than two by three feet, with a step-ladder or flight of steps leading thereto. No mansard or other roof shall be constructed more than one story in height, nor more than twenty feet in height from the upper floor of the building upon which it is placed to the highest part of said roof, unless the same be constructed of fire-proof material throughout. Mansard roofs may be constructed without any additional thickness of walls, and topped out with nine-inch walls.

Cornices or roof decorations on any building hereafter erected to a height of more than sixty feet to the eaves shall be made of non-combustible materials, to be approved by the inspector of buildings. All fire-proof cornices shall be well secured to the walls with iron anchors, independent of any wood-work; and in all cases the wall shall be carried up to the planking of the roof, and where the cornice projects above the roof the wall shall be carried up to the top of the cornice; and all exterior wooden cornices on buildings as above described, when replaced, shall be constructed of some non-combustible material, as required for new buildings. All exterior wooden cornices or gutters hereafter damaged by fire shall be taken down, and if replaced, shall be constructed of fire-proof material.

SEC. 14. Buildings now or hereafter erected shall be kept provided with proper metallic down spouts and eave or cornice gutters for conducting water from the roof to the ground, sewer, or street, in such manner as shall protect the walls and foundations from damage; and in no case shall the water from roofs be allowed to drain on or damage the adjoining property, nor shall it be allowed to flow upon the sidewalk, but shall be conducted by drain pipe or pipes to sewer, or to the gutter, where no sewer exists.

Buildings hereafter erected shall have brick, iron, or tile drains, with air-tight joints, laid with a regular fall to the public sewer, and properly entered therein.

All water-closets, wash-trays, wash-basins, sinks, urinals, &c., must be trapped, each with its own proper trap, and every house sewer shall have a running trap, of the dimensions of the sewer, between the building line and the main sewer, or, where this is impracticable, the trap shall be placed inside the building line, and shall have a manhole. A ventilating shaft of not less than two-inch iron pipe, with tight joints, connecting with the house drain inside of the trap and projecting above the roof, shall be constructed in the front wall of every house, or the house drain may be connected with a shaft or flue not less than three inches in diameter, constructed for ventilating purposes.

The soil pipe shall, in every case, be carried above the roof of the

building at least four feet, and shall be provided at the top with an ejecting ventilator; or it may be connected with any chimney flue which serves a fire that is continuously maintained, as that of the kitchen range.

The down-spouts must be connected with the house-drain, and, if constructed with tight joints, may be used as ventilating shafts.

In every case where a sewer connection is made below the level of spring tides, or with a sewer which is liable to back water into the house connection, the house-drain must be provided with a self-acting flood-gate, made of some material not perishable.

SEC. 15. Vaults shall be securely covered with substantial flagging, or arched with hard brick. The crown of the arch shall be at least six inches below the established surface of the footway; and any openings in the top of the vault shall be at inner edge of extreme wall, and have a suitable covering placed thereon; no iron grate or other fixture shall project above or be sunk below the established grade of the pavement, and the outer wall of the vault must be at least four feet within the inner line of the curb.

No vault shall be constructed so as to interfere with any sewer, water-pipe, manhole, gas-pipe, tree, or other public work or improvement.

SEC. 16. Every building shall be provided with at least one water-closet, or with an outhouse for privy purposes.

SEC. 17. Areas must be protected by iron or stone railing, at least forty-two inches in height, and, when they extend the entire width of any lot frontage, shall be protected by said railing with openings or gates four feet wide.

Proper protection, by hand-rails, shall be provided where steps are built over areas, or where steps exceed four in number, and for all platforms where areas exist. Basement and cellar steps shall be protected by railing like that required for areas, with four-foot openings or gates.

SEC. 18. Wooden buildings may be erected in that portion of the District of Columbia outside of the cities of Washington and Georgetown, and that portion of Georgetown not included in the fire limits, provided that on lands laid out in town-lots no wooden buildings shall be erected or placed within twenty-four feet of any house built of brick or other incombustible material, when such wooden building is intended for occupation as a blacksmith's or whitesmith's shop, carpenter's shop, factory, livery-stable, or as a stable not used for domestic purposes, and no such wooden building shall be erected within fifty feet of any stone or brick house, unless the written permission of the owners of all property to the distance of fifty feet on either side be first obtained, and then it shall not be less than thirty feet from such house.

It shall be lawful for the owner or other party interested, after having obtained a permit from the inspector of buildings, to make any necessary repairs consistent with these regulations, upon any wooden or frame building already built, provided that the height of said building to the eaves shall not be increased thereby. A flat roof covered with metal or other non-combustible material may be substituted for a gravel or pitch roof. Wooden buildings, sheds, or shops which are temporary in their construction and dilapidated in their character shall not be repaired, but shall be taken down.

It shall not be lawful to erect, construct, enlarge, or remove any wooden building within the fire limits; but such may be moved to any point outside of the fire limits, if not located in violation of any section of these regulations. And for satisfactory reasons, permits approved by

the executive authority of the District may be given to move wooden buildings from one place to another within the fire limits; but in every case a deposit shall be made, not to exceed two hundred dollars—the amount to be determined by the inspector of buildings—to secure public and private property from damage arising from such removal. The amount so deposited shall be returned to the depositor as soon as the inspector of buildings ascertains that no damage has been sustained; but if, in the opinion of the inspector, any damage has been done, it shall be made good out of the deposit, and the balance, if any, shall be returned to the owner.

No wooden building hereafter erected shall exceed the height of two stories and mansard roof, or three stories to the square thereof.

No wooden building to be used for dwelling purposes shall be erected more than fifty feet long without the intervention of a brick partition wall at least nine inches in thickness, and said wall shall be carried at least six inches above the roof, whether said roof be flat or pitched.

No wooden building to be used for the purposes of any mechanical business shall be built at a less distance than twenty-four feet from any dwelling, and such building shall be subject in construction to such restrictions as the inspector of buildings shall designate in the permit; and no wooden building now erected shall be used for mechanical purposes unless the same shall be at a greater distance than ten feet from any dwelling-house.

All wooden buildings shall be built upon brick or stone foundations.

Temporary wooden sheds may be erected for use of builders, but only in front of or upon the lot on which the building is being erected, and for storage or other purposes upon wharves, in such manner as the inspector of buildings may direct, consistently with these regulations. A one-story frame kitchen, not exceeding ten feet by twelve feet, or one hundred and twenty square feet of ground area, and a bath-room eight feet by eight feet, or sixty-four square feet, may be built to a brick or frame-house. A story not to exceed ten feet by twelve feet, or one hundred and twenty square feet, may be built on an existing one-story building or kitchen to a frame house, but in that case no other addition shall be made for a bath-house. Rooms may be added in the attic of a substantially good wooden building, with a steep or gable roof of sufficient height to form a story not less than eight feet in the clear. All extensions or enlargements mentioned or implied shall be constructed in such manner as the inspector of buildings shall approve. Sheds for fuel or water-closets, and for other purposes, not to exceed eleven feet in height at the highest point thereof, and not to exceed twelve feet in depth and twenty feet in length, may be erected on the rear of lots.

SEC. 19. Any wooden building already constructed within the fire limits, which may hereafter be damaged, may be repaired at a cost not exceeding one-half its value, exclusive of the value of its foundation; *Provided*, The building was a good sound one previous to said damage; but if the damage shall amount to more than one-half the value, then the building shall be taken down. The inspector of buildings shall determine the amount and extent of such damage.

SEC. 20. Depositories for ashes shall be built of brick or other fire-proof material.

SEC. 21. No livery-stable shall be erected, nor shall any building already erected be converted to the uses of a livery-stable, within thirty feet of the building line of any street or avenue, nor within fifty feet of any dwelling-house fronting on any street or avenue; and permit for any such building shall not be issued until the applicant shall first ex-

hibit a license for the keeping of a livery-stable on said premises. And it shall be the duty of the proprietor or proprietors of a licensed livery-stable, within the cities of Washington and Georgetown, to have the carriage drive in front of said stable used for the purpose of entrance to it paved with brick on edge, or other approved material. All stables where horses are kept for use in public carriages or wagons, omnibuses, street railways, or other conveyances, or for any purposes not strictly of a private character, shall be deemed to be "livery-stables." Nothing in this section shall be construed to debar the erection of a stable for private or domestic purposes only, under such restrictions as the inspector of buildings may impose, with the approval of the executive authority of the District.

SEC. 22. Within the fire limits it shall not be lawful to erect any building for, nor to convert any existing building to, the uses of a cow or hog yard, pen, or stable, or for dairy or other similar purposes. Nothing in this section shall apply where one cow only is kept for family use.

SEC. 23. Projections from the building-lines of any street in the city of Washington, of ninety feet or less in width, shall not exceed the following distances: Areas, six feet; show windows, thirty-two inches; bay windows, five feet on parked streets, and four feet on unparked streets; steps, eleven feet on parked streets where the parking is less than twenty-four feet wide, and twelve feet where the parking is over that width, and nine feet on unparked streets; tower projections, forty-two inches on parked streets, and thirty-six inches on unparked streets. Projections from the building-line of any avenue or street in the city of Washington over ninety feet in width shall not exceed the following distances: Areas or cellar steps, six and one-half feet; show-windows, thirty-six inches; steps, eleven feet; bay-windows, five feet; tower projections, forty-two inches on parked streets, thirty-six on unparked streets; areas not to exceed eighteen inches in width from bay windows may be made around them where the windows are built from the foundation.

Carriage-steps shall not exceed in dimensions three and one-half feet by twenty inches, and in no case shall they extend beyond the inner line of the curb.

None of the projections heretofore mentioned shall be allowed on Pennsylvania avenue west of the Capitol, except show-windows and areas; and colonnades thereon shall not project more than six feet from the building, when their erection is permitted.

Tower projections, not exceeding thirty-six inches, may be constructed upon all corners made by lettered streets intersecting Pennsylvania avenue between the Capitol and Washington Circle, and upon all other corners where parked streets intersect avenues, or where avenues intersect avenues; tower or bay-window projections may be constructed in such manner as may be determined by the inspector of buildings, and approved in writing by the executive authority of the District; but in no case shall bay-windows or tower projections be more than fourteen feet wide from out to out.

Structures or projections above or outside of the roof, such as domes, cupolas, pavilions, towers, spires, pinnacles, buttresses, lanterns, louvres, lutheran or dormer windows, sky-lights, scuttles, ventilators, cornices, and gutters, shall be made with cast or wrought iron, tin, copper, zinc, or other metal, or stone, slate, brick, cement, or mortar, or other incombustible material.

Twelve feet of sidewalk shall remain free from obstruction in the

cities of Washington and Georgetown, unless the executive authority of the District shall otherwise permit; but in streets less than eighty feet wide the width of the sidewalk shall be, as far as practicable, uniform, and shall be determined by the engineer in charge of public works, with approval of the executive authority of the District.

In no case shall the wall terminating at a street or alley project beyond the line of said street, except for ornamental projections, as hereinbefore provided. Where projections are allowed, none shall be made unless the line of front parallel with street or alley be preserved by at least the length of one brick from the party line on the side of the house on which the private door is located, and by at least the length of three bricks on each side of bay-window, tower, or other projections, excepting where continuous rows of buildings are erected, in which case an equivalent in spaces of parallel surface to each house, if approved by the inspector of buildings, may be laid to suit the taste of the owner or builder. Where buildings are designed for store or business purposes, projections shall not be less than twelve inches from the party line.

SEC. 24. No sign shall be built, erected, or hung upon the roof or on the front of any building in the cities of Washington and Georgetown to project more than three feet six inches beyond the building line; nor shall any box, board, or other sign, or frame of any kind for a sign, be set up around or against any tree, lamp-post, or other post, pole, or other object in said cities; and any sign now erected, or that may be erected, on the top of, or on the street front of, any building, shall be taken down and removed when rotten or unsafe.

SEC. 25. Awning posts and frames shall be of iron; the posts shall be set in stone or iron blocks not less than six inches within the outer edge of the curb, and the frames must be firmly secured to the building. On parked streets awnings may be used in front of business property to the outer edge of parking, but in no case to exceed the distance of fifteen feet from the building line. No part of the frame or canvas of an awning shall be at a less height than eight feet from the sidewalk.

SEC. 26. Persons engaged in the erection, alteration, or repair of any building may, for such reasonable period as the inspector of buildings shall decide, occupy with the building material thereof one-half of the carriageway in front of the lots on which such work is being done, and so much of the footwalk as will leave and keep clear at least six feet thereof from the curb line. They may also occupy one-half the roadway fronting twenty feet on adjoining lots, when the inspector of buildings shall consider necessary, the material to be placed and arranged as that officer may direct. Builders or owners so occupying the roadway or footwalk shall exhibit a light at night; or, when the materials occupy 25 feet or more along the street or pavement, two lights, placed in such manner as to warn passers-by that the materials are upon the street, and to distinctly show the clear passage-way left in carriage-road or footwalk. All materials and rubbish shall be removed by the contractor or owner of the property whenever so directed by the inspector. No gutter shall be obstructed, except by temporary damming for collecting water for building purposes when there are no other available means therefor, under such conditions as the inspector of buildings may prescribe. Nothing in this section shall be construed so that free passage of wagons, carts, drays, or other conveyances may be obstructed or impeded.

SEC. 27. No foundry or furnace for melting or working glass, iron, or other metal; machine shops for machinery to be driven by steam or other motive power; steam-boilers or engines propelled by steam or other motive power, or any building therefor, shall hereafter be erected

for use within the fire limits, unless the written assent thereto of all the property owners within ninety feet of the outline of the buildings to be erected therefor be first obtained; nor shall any such building be erected within thirty feet of any dwelling-house. All boiler-rooms hereafter constructed in any building under this section shall be constructed of brick and iron, and shall be so arranged that all openings between them and other parts of the building shall be closed by iron or metal-covered doors, which shall be securely closed at the close of each day.

Engines and boilers for driving machinery for grinding coffee, spices, or for other similar purposes in stores, or for elevators in hotels, stores, and warehouses, or for heating purposes, may be permitted, under such restrictions as the inspector of buildings may direct in each case, upon the notice in writing by the owner or agent intending to set up such boiler or engine to the inspector of buildings, fully describing said boiler or engine and the use for which it is intended, but not until a special permit shall have been obtained.

No building to be used for a saw or grist mill, blacksmith or white-smith shop, or shop for the working of wood or other combustible material, rag warehouse, or shop or building for the storage of materials of an inflammable nature, shall be erected within thirty feet of any dwelling, nor shall any building be converted to such uses within thirty feet of any dwelling-house.

SEC. 28. The lessee, owner, or occupant of any warehouse, store, manufactory, or other building in which there are hoistways or other openings besides the usual stairways, shall cause the same to be securely protected by railing, or such other appliances as may be deemed necessary by the inspector of buildings.

SEC. 29. All partition or party fences shall be kept in good and sufficient repair by the proprietors of the ground on each side, at their joint expense: *Provided*, The ground on each side shall be inclosed, used, or occupied; and if any person whose duty it shall be to make or keep in good repair any fence, or part of a fence, shall refuse or neglect so to do for five days after request being made by the other party interested, or his agent, then it shall be lawful for the party so making the request, as aforesaid, to make or repair the whole fence or part of a fence, and to recover one-half of the expense thereof from the person so refusing or neglecting: *Provided also*, That no fence erected under the authority of these regulations shall be less than five nor more than seven feet in height, except by consent of the parties interested on both sides of such fence, and that the expense of making such fence shall not exceed the market value of a plain, substantial board structure of the kind.

SEC. 30. If any person shall inclose ground adjoining to that already inclosed, and shall thereby be benefited by any fence before erected, the person so benefited shall pay therefor a just and reasonable compensation, regard being had to the condition of the fence at the time.

SEC. 31. No person or persons shall establish any coal or wood yard, lumber-yard, or yard for the storage of coal, lumber, or wood, or yard for the storage or sale of any new or second-hand combustible material, upon any new site, or site not used for such purposes for the period of one year previously, within fifty feet of any lot or building on either side of premises intended for any of the uses above named, unless the person or persons desiring to establish or locate any such premises shall first file with the inspector of buildings the written consent of all the owners of real estate within ninety feet of the ground which is contemplated to be occupied; in which case the question shall be submitted in writing by the inspector of buildings to the executive authority of the District, for its decision.



The storage in large quantities of any combustible material whatever shall not be permitted in the thickly-built portions of the cities of Washington and Georgetown.

SEC. 32. No person or persons shall establish, erect, construct, or lay off within the building limits any brick-yard, brick-kiln, or pottery furnace; or any slaughter-house, soap or candle manufactory, bone boiling or other establishment whereby offensive odors are generated to the detriment or injury of the neighborhood, upon any site not used as aforesaid during twelve months immediately preceding, nor shall any such establishment now existing be extended to within one hundred and fifty yards of any dwelling-house occupied or used, unless the person or persons desiring to conduct or extend any of the above-enumerated establishments shall first file with the inspector of buildings the written consent of all the property owners and occupants within two hundred and fifty yards of such establishment, and shall have received a permit therefor.

SEC. 33. All blank forms of permits, applications, certificates, and notices, required by these regulations, shall be prepared under the supervision of the executive authority of the District.

Application for any permit or certificate prescribed in these regulations must only be made on an appropriate blank, prepared as hereinbefore required, and obtained from the office of the inspector of buildings. If the desired permit or certificate can be properly issued, the applicant will be informed of amount of the requisite fee or other proper charge, the payment of which must be made to the treasurer of the District, who shall, in writing, receipt therefor upon the application. The receipt so given shall be the evidence of such payment on which further action in the premises may be taken by the inspector of buildings under these regulations.

SEC. 34. The fees under these regulations shall be as follows: For each permit for new building or other structure, two dollars for each building; for each permit for alteration or repair, one dollar for each building or structure; for each permit for vault, two dollars per lineal front foot of proposed vault; for each permit for area in front of the building-line of any building now erected, or any structure or building hereafter erected, after the same shall have been completed, one dollar for each area; for all other permits and certificates, one dollar each; for measuring, under section 9, in the matter of party walls, the fee shall not exceed five dollars, except in cases of express agreement, and for examination of dangerous buildings, defective escape facilities, or other defective or insufficient arrangements or appliances in public assembly-rooms, on appeal, the fee shall be as prescribed in section 3.

SEC. 35. In all buildings of a public character, already erected or hereafter built, such as public halls, churches, and places of amusement and instruction, the doors shall open outwards and remain open when the building is occupied, except fly-doors, opening both ways, which may be kept closed. The hall doors, stairways, seats, and aisles shall be so arranged as to facilitate egress in cases of fire or accident; and to afford the requisite and proper accommodation for the public protection in such cases, all aisles and passageways in such buildings shall be kept free from camp-stools, chairs, sofas, and other obstructions during any service, exhibition, lecture, performance, concert, ball, or any public assemblage.

In all theaters and public places of amusement there shall be kept, attached to a plug or water attachment, to be furnished by the owners or lessees for that purpose, sufficient hose, of the size used by the fire department of Washington and Georgetown, to extend to the furthest lim-



its of said place of amusement, and said hose shall be kept at all times in good order and repair, and ready for immediate use.

SEC. 36. If any person or persons shall violate any provision of these building regulations, or of any regulation hereafter adopted in amendment of or in addition thereto, for the violation of which no other penalties are therein provided, such person or persons shall forfeit and pay not less than ten nor more than one thousand dollars for each and every such violation. All penalties under these regulations shall be recovered by the executive authority of the District of Columbia, or their successors, under information filed in the name of said District in the police court of said District, as fines are recovered for the violation of municipal ordinances.

If any person, after being fined in the police court for the violation of any provision of these regulations, shall persist in the same violation, such person shall forfeit and pay the further sum of one hundred dollars for each and every week that he or she shall so persist, except in the case of maintaining a dangerous structure, when he or she shall forfeit and pay said further sum of one hundred dollars for each and every day that he or she shall maintain said structure after having been fined in the police court for doing so.

In addition to the proceeding before the police court by information, the supreme court of the District of Columbia, or any justice thereof, either in term time or vacation, shall exercise equity powers for the enforcement of these regulations, and particularly for the removal, within a time fixed by the court or the acting justice, of any building or structure, the filling up of any vault or area, and the abatement of any nuisance of which complaint shall be made as a violation of these regulations or any part thereof.

SEC. 37. All building regulations and parts of building regulations of the late corporations of Washington and Georgetown inconsistent with these regulations are hereby repealed.

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OCTOBER 5, 1878.

*Ordered*, That those physicians to the poor appointed under the law appropriating \$5,000 for medicines, &c., for the poor, who will give their services gratuitously, are authorized to give prescriptions for medicines to the extent of fifty dollars in each precinct, on condition that the apothecaries will furnish medicines on the same terms as heretofore.

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OCTOBER 8, 1878.

*Ordered*, That the orders respecting building regulations are hereby so amended as to give the inspector of buildings discretion in ordering what part of foot pavements occupied by building materials shall be kept open, the width of such opening never to be less than six feet.

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OCTOBER 19, 1878.

*Ordered*, That pursuant to the provisions of the act of Congress providing a permanent form of government for the District of Columbia, approved June 11, 1878, and an act making appropriations for sundry civil expenses of the government for the year ending June 30, 1879, and for other purposes, approved June 20, 1878, a tax be, and the same is hereby, levied of \$1.50 on every \$100 of real estate not exempted by law, except upon real property held exclusively for agricultural purposes

without the limits of the cities of Washington and Georgetown, and so designated by the assessors in their annual returns, the rate on which shall be \$1 on every \$100; and upon all personal property in the District of Columbia, not taxable elsewhere, \$1.50 on every \$100, according to the cash valuation thereof.

The first half of the said tax shall be due and payable on the 1st day of November, 1878, and the second half on the 1st day of May, 1879.

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OCTOBER 22, 1878.

*Ordered*, That the following clause shall be inserted in the building regulations:

Hereafter no person shall slake limes or mix mortars, or cause the same to be done, upon the bituminous or asphalt pavements within the District of Columbia; and that it shall be the duty of the inspector of buildings, in giving building permits, to require mortar beds to be constructed with tight bottoms, so that the lime or mortar shall not come in contact with the pavement.

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OCTOBER 26, 1878.

*Ordered*, That James Small, sealer of weights and measures, D. C., is hereby appointed market-master of the Washington Market, for the purpose of enforcing at the market all laws and ordinances in force in the District relating to the duties and authority of market-master. The duties to be performed without additional compensation.

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OCTOBER 30, 1878.

*Ordered*, That no permit will hereafter be granted by the Commissioners for the erection of telegraph poles in the streets of Washington and Georgetown, except for existing telegraph lines; and companies and others establishing new lines will be required to carry their wires underground or on houses.

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NOVEMBER 2, 1878.

*Ordered*, That hereafter the Commissioners will approve no requisitions for the public schools, except for fuel, unless first sanctioned by the board of trustees.

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NOVEMBER 7, 1878.

*Ordered*, That section 25 of the building regulations be amended by inserting the words "*and in no case shall awnings, now or hereafter erected, interfere with street lamps or trees,*" after the words "*secured to the building.*"

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NOVEMBER 12, 1878.

*Ordered*, That the number of mounted officers of the Metropolitan police of this District be increased to fifty. The additional officers mounted under this order shall receive the usual allowance of twenty dollars per month each.

That all requisitions in favor of the Commissioners of the District of Columbia, and all warrants and transfer checks on the Treasury of the United States, shall be signed by the president or the president *pro tempore* of the Board of Commissioners of said District.

NOVEMBER 18, 1878.

*Ordered*, Pursuant to the proclamation of the President of the United States, of the 30th day of October, ultimo, designating Thursday, the 28th instant, for public thanksgiving, the offices of the government of the District of Columbia will be closed on the last-named date.

NOVEMBER 25, 1878.

*Ordered*, That the engineer commissioner continue the repair of concrete pavements until otherwise ordered.

NOVEMBER 27, 1878.

*Ordered*, That the offices of the District government be closed at 12 o'clock m. to-day.

DECEMBER 6, 1878.

*Ordered*, That no officer of the District government shall communicate directly with another department of the District government requesting or affecting the official action of such department. When the service of one department is desired by another, or any branch thereof, the matter must be submitted to the Commissioners.

DECEMBER 12, 1878.

*Ordered*, That the following named be and they hereby are appointed a special committee to open, in the presence of the Commissioners, all bids for general supplies to be furnished the District of Columbia:

Lieut. R. L. Hoxie; Capt. W. G. Brock, Metropolitan police, D. C.; Martin Cronin, chief engineer fire department, D. C.; Henry Larman, water department, D. C.

DECEMBER 16, 1878.

*Ordered*, That the hack-stand on Sixth street, between Pennsylvania avenue and Louisiana avenue north, is abolished hereby.

That a hack-stand is hereby established on Sixth street, in the vicinity of the Baltimore and Potomac depot, the limits to be fixed by the major of police.

DECEMBER 17, 1878.

*Ordered*, That the carriage-stands paved with stone at the eastern front of the Capitol in the Capitol grounds are hereby established as hack-stands.

DECEMBER 20, 1878.

*Ordered*, That the offices of the District government be closed on the 25th instant and 1st proximo, and at 12 o'clock m. on the 24th, 26th, 27th, 28th, 30th, and 31st instant.

DECEMBER 21, 1878.

*Ordered*, That there shall be kept by the auditor and comptroller, under the following heads, a record of all property leased to or owned by the District of Columbia or any branch of the government thereof:

Description of property.	Date of conveyance or lease.	Term.	Consideration.	Grantor or lessor.	Remarks.
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He shall also have custody of the original instrument of writing in each such case of lease or conveyance.

§ That Congress having, by the act of June 11, 1878, creating the permanent form of government for the District of Columbia, made the Treasury of the United States the treasury of the District, and in other respects simplified the forms and requirements of the local government, and, in anticipation of such result, conferred upon the Commissioners the power to consolidate and abolish such offices as might, under the law, become necessary to adapt them to the new relations of government to the people and to a just consideration of economy, the Commissioners have, in observance of the duty thus imposed, determined upon the following order:

- (1.) That two of the offices of assessor be abolished.
- (2.) That the offices of treasurer, assessor, and superintendent of assessments and taxes be consolidated under the name of the treasurer and assessor's office.
- (3.) That Robert P. Dodge, in addition to his present office, be appointed assessor, and be charged with the duties of the three offices consolidated by this order.
- (4.) That William Morgan be appointed assistant assessor, and in addition be charged, under the direction of the treasurer and assessor, with the duties of his present office.
- (5.) That all licenses shall be issued by the treasurer and assessor.
- (6.) That all tax bills shall be prepared by the treasurer and assessor, and by him be turned over and charged to the collector of taxes for collection; and each bill shall show any arrearages of taxes due upon the property mentioned in it.

§ That this order shall take effect January 1, 1879.

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DECEMBER 23, 1878.

As a just tribute to the memory of the Hon. Alpheus S. Williams, late a Representative of the State of Michigan in the Congress of the United States, and chairman of the committee of the House of Representatives on the District of Columbia, who expired in this city on the 21st instant, the Commissioners deem it fit, on behalf of the people of this District, to put upon their minutes the following order:

That the citizens of the District of Columbia hold in grateful remembrance the just, generous, and patriotic consideration extended at all times by General Williams, as chairman of the District Committee, to the best interests of this District, and his kind and graceful courtesies to its citizens. His career as a soldier and civilian is part of the history of his country; his many private virtues are the consoling heritage of his family and friends.

That the secretary be directed to transmit a copy of this order to the family of the deceased and to the Speaker of the House of Representatives.

By order of the board.

S. L. PHELPS,  
*President.*

{ SEAL OF THE DISTRICT }  
{ OF COLUMBIA. }

WILLIAM TINDALL,  
*Secretary.*

NOVEMBER 18, 1878.

*Ordered*, Pursuant to the proclamation of the President of the United States, of the 30th day of October, ultimo, designating Thursday, the 28th instant, for public thanksgiving, the offices of the government of the District of Columbia will be closed on the last-named date.

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*Ordered*, That the offices of the District government be closed at 12 o'clock m. to-day.

DECEMBER 6, 1878.

*Ordered*, That no officer of the District government shall communicate directly with another department of the District government requesting or affecting the official action of such department. When the service of one department is desired by another, or any branch thereof, the matter must be submitted to the Commissioners.

DECEMBER 12, 1878.

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Description of property.	Date of conveyance or lease.	Term.	Consideration.	Grantor or lessor.	Remarks.
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He shall also have custody of the original instrument of writing in each such case of lease or conveyance.

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(1.) That two of the offices of assessor be abolished.

(2.) That the offices of treasurer, assessor, and superintendent of assessments and taxes be consolidated under the name of the treasurer and assessor's office.

(3.) That Robert P. Dodge, in addition to his present office, be appointed assessor, and be charged with the duties of the three offices consolidated by this order.

(4.) That William Morgan be appointed assistant assessor, and in addition be charged, under the direction of the treasurer and assessor, with the duties of his present office.

(5.) That all licenses shall be issued by the treasurer and assessor.

(6.) That all tax bills shall be prepared by the treasurer and assessor, and by him be turned over and charged to the collector of taxes for collection; and each bill shall show any arrearages of taxes due upon the property mentioned in it.

§ That this order shall take effect January 1, 1879.

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DECEMBER 23, 1878.

As a just tribute to the memory of the Hon. Alpheus S. Williams, late a Representative of the State of Michigan in the Congress of the United States, and chairman of the committee of the House of Representatives on the District of Columbia, who expired in this city on the 21st instant, the Commissioners deem it fit, on behalf of the people of this District, to put upon their minutes the following order:

That the citizens of the District of Columbia hold in grateful remembrance the just, generous, and patriotic consideration extended at all times by General Williams, as chairman of the District Committee, to the best interests of this District, and his kind and graceful courtesy to its citizens. His career as a soldier and civilian is part of the history of his country; his many private virtues are the consoling heritage of his family and friends.

That the secretary be directed to transmit a copy of this order to the family of the deceased and to the Speaker of the House of Representatives.

By order of the board.

S. I. PHELPS,  
*President.*

{ SEAL OF THE DISTRICT }  
{ OF COLUMBIA. }

WILLIAM TINDALL,  
*Secretary.*

FEBRUARY 6, 1879.

Whereas the Commissioners have been informed that many members of the Metropolitan police habitually anticipate the payment of their salaries by borrowing from brokers at exorbitant rates of interest, frequently as high as ten per cent. per month, for such loans; and

Whereas the practice is regarded as demoralizing and prejudicial to the discipline of the force; it is

*Ordered*, That any member of the Metropolitan police force of the District of Columbia who shall be known to have procured an advance of money in that way, after the first proximo, will be regarded as having given cause for his dismissal from the service.

FEBRUARY 20, 1879.

*Ordered*, That in pursuance of the order of the President of the United States, directing the observance of the 22d instant as a public holiday, the offices of the government of the District of Columbia will be closed on that day.

FEBRUARY 20, 1879.

*Ordered*, That no bill for expenses incurred on account of any department of the District government shall be passed by the accounting officers of the District unless certified by the officer in charge of such department.

FEBRUARY 27, 1879.

*Ordered*, That Robert P. Dodge, treasurer and assessor of the District of Columbia, be, and he is hereby, appointed acting auditor and comptroller of said District, to sign warrants upon the Treasury, during the absence, on account of illness, of Auditor and Comptroller Vinson.

MARCH 14, 1879.

*Ordered*, That the following schedule of rents is hereby fixed for the Eastern Market, viz:

	Per month.
Class 1. Twenty butchers' stalls, at.....	\$4.50
Class 2. Forty-two hucksters' stalls, at.....	3.00
Class 3. Four bacon dealers' stalls, at.....	4.00
Class 4. Five fish dealers' stalls, at.....	3.00
Class 5. Eight butter dealers' stalls, at.....	4.00
Class 6. Six miscellaneous stalls, at.....	4.00

These rates will be considered as having taken effect on the 1st day of November, 1878, and any excess of rates heretofore paid will be credited on present rentals until the total amounts paid, subsequent to that date, shall have conformed to this schedule.

MARCH 15, 1879.

*Ordered*, That when an excess of assessment for special improvements has been paid upon one part of a corner lot, such excess can be applied to payment of assessments upon the other part of the same lot; provided no certificate of assessment is outstanding and held by a third party.

MARCH 22, 1879.

*Ordered*, That the dedication of Meridian avenue, so called by reason of the extension of Sixteenth street northwest, become of none effect and void, and the rights of the owners of the land so dedicated remain unimpaired by reason thereof.

*Phelps or Dent.*

MARCH 24, 1879.

*Ordered*, That the salary of treasurer and assessor be fixed at \$3,000, to take effect from 1st January, 1879.

APRIL 5, 1879.

*Ordered*, That the following clause shall hereafter be embodied in advertisements for, and the general conditions attached to, proposals for work or material of any kind done or furnished to the District of Columbia under contract, viz:

No proposals will be received from any failing contractor, known as such on the records of the District of Columbia, after July 1, 1878.

APRIL 22, 1879.

*Ordered*, That the treasurer and assessor, the collector of taxes, and the auditor and comptroller, are hereby appointed a committee to revise the method of keeping the tax accounts of the District, and report such modification as they may deem advisable therein to the Commissioners without delay.

APRIL 23, 1879.

*Ordered*, That hereafter inspections of coal scales shall be made quarterly, and the fee for each inspection will be \$1.

MAY 2, 1879.

*Ordered*, That John Eaton, W. W. Curtis, and John H. Brooks are requested to act as a committee to examine and report upon the relative merits of the plans of school buildings, submitted to the Commissioners in response to their notice to architects of the 21st of March, 1879.

MAY 24, 1879.

*Ordered*, That the order of August 3, 1878, appointing a committee to open proposals for contracts appertaining to the engineer's department of the District, be modified by the substitution of Lieut. F. V. Greene for Lieut. R. L. Hoxie in all cases where the proposals to be opened relate to surface work.

MAY 27, 1879.

*Ordered*, That the offices of the District of Columbia be closed on Decoration Day, Friday, the 30th, instant.

JUNE 26, 1879.

*Ordered*, That the office of the mechanical janitor for the public schools of the District of Columbia be, and is hereby, abolished, to take effect



on the 30th June, 1879; and that from and after that date all repairs of school buildings shall be made under the direction and supervision of the inspector of buildings.

That the superintendent of property of the District is hereby authorized and directed to receive and take charge of all property of said District remaining in the hands of said mechanical janitor, and to schedule and receipt for the same.

OFFICE OF THE COMMISSIONERS  
OF THE DISTRICT OF COLUMBIA,  
Washington, June 30, 1879.

AN ACT to confer upon the Commissioners of the District of Columbia certain powers, duties, and limitations contained in chapter eight (water service) of the Revised Statutes of the United States relating to the District of Columbia, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the Commissioners of the District of Columbia shall have all the powers and be subject to all the duties and limitations provided in chapter eight of the Revised Statutes of the United States relating to the District of Columbia, excepting such powers and duties as belong to the Chief of Engineers: *Provided,* That water-main taxes and water-rents shall be uniform in said District: *And provided further,* That the rate of interest specified in section two hundred and two of said Revised Statutes shall be increased to ten per centum per annum from and after the passage of this act.

\* \* \* \* \*

Approved June 18, 1879.

*Ordered* That under the authority invested in the Commissioners of the District of Columbia by the above-recited act, the following schedule of annual water-rates is adopted, to take effect on the 1st of July, 1879, and will continue in force until otherwise ordered:

DOMESTIC RATES.

The rates for domestic purposes will be charged according to the assessed valuation of the building improvements, as follows:

	Per annum.
For houses or tenements of less valuation than \$500 .....	\$4
[NOTE.—This rate will be charged in all cases where water is taken from a hydrant in the yard, there being no fixture in the house.]	
For houses valued from \$500 to and including \$1,000 .....	\$5
For houses valued from \$1,000 to and including \$1,500 .....	6
For houses valued from \$1,500 to and including \$2,000 .....	7
For houses valued from \$2,000 to and including \$2,500 .....	8
For houses valued from \$2,500 to and including \$3,000 .....	9
For houses valued from \$3,000 to and including \$4,000 .....	10
For houses valued from \$4,000 to and including \$5,000 .....	11
For houses valued from \$5,000 to and including \$6,000 .....	12
For houses valued from \$6,000 to and including \$7,000 .....	13
For houses valued from \$7,000 to and including \$10,000 .....	14
For all houses valued over \$10,000 .....	15

SPECIAL BUSINESS AND MISCELLANEOUS RATES.

In every case where business houses or tenements are occupied also for domestic purposes, the regular charge for domestic purposes according to the assessed valuation will be made, and in addition thereto the special business rate, as hereinafter specified.

Special and miscellaneous business will be charged at the following rates, viz:

Bar-rooms and restaurants, from fifteen to fifty dollars per annum.

Billiard-rooms, from five to twenty dollars per annum.

Eating-houses, from eight to twenty dollars per annum.

Barber-shops, from six to twelve dollars each per annum.

Public baths, four dollars per annum for each and every tub.

Bakeries, from three to fifteen dollars per annum.

Boarding and tenement houses will be charged at a rate in accordance with the assessed valuation of same, and in addition thereto fifty cents per annum for each and every room over and above the number of three rooms in said boarding house or tenement.

Building purposes.—For each one thousand bricks laid, three cents per thousand. Special rates will be charged for public works.

Brick-yards, ten to fifty dollars each per annum, according to production. Machinery and horse power extra, at regular rates.

Boarding-schools and school-houses, from five to ten dollars per annum.

Cow-stables.—For each and every cow, twenty-five cents per annum.

Depots.—Locomotive-engines taking water once per day, seventy-five dollars; twice per day, one hundred and fifty dollars. The building extra, according to the number of offices, bars, and refreshment-rooms; water-closets and urinals, three dollars each.

Dye-houses.—Five to twenty dollars per annum. Machinery taking water, extra.

Fountains will only be used three hours per day, and will be charged as follows: one-sixteenth of an inch jet, five dollars per annum; for a one-eighth of an inch jet, ten dollars per annum; for a one-quarter of an inch jet, twenty dollars per annum; for a one-half inch jet, fifty dollars per annum; for a three-quarters of an inch jet, seventy-five dollars per annum; and for an inch jet, one hundred and fifty dollars per annum.

In case a meter is used, there will be charged one-half a cent for each and every hundred gallons. No fountain will be permitted on any premises where the water is not taken for other purposes and to an extent sufficient for those purposes; and if the water from the jet or fountain be permitted to flow into premises adjacent to or in the neighborhood where it may be used for other purposes, the supply will be stopped and the amount of payment forfeited.

Florists will be charged at the rate of from five to twenty dollars per annum, according to the size of the premises.

Horses, private.—For each and every horse, one dollar and fifty cents; said sum to include water for washing carriages.

Horses, hackney and draught.—For each and every horse, seventy-five cents per annum.

Hotels.—One dollar for each bed or furnished room; bar, billiard-rooms, barber-shops, offices, stores, and machinery taking water, extra.

Laundries, five to fifteen dollars, according to general business. Machinery using water, according to rates for stationary engines and boilers.

Livery stables.—For each and every horse, seventy-five cents per annum.

Mills.—Five dollars. Machinery extra, according to the rates for stationary engines.

Market-houses, seventy-five cents per stall.

Printing-houses, from five to ten dollars per annum, according to the number of presses. Machinery in same using water will be charged in addition thereto according to the rate for stationary engines.

Stationary engines, three dollars and fifty cents per horse-power. Boilers without engines, one dollar and seventy-five cents per horse-power.

Stores, shops, confectioneries, warehouses, and mills, five to ten dollars per annum.

Steamboats, according to tonnage; 50 tons and under, twenty-five dollars; over 50 tons, fifty dollars.

Street-washers, where parties use same and water is not taken in the house, will be charged at rates from three to ten dollars per annum, according to nozzle or tap, and may be used not longer than thirty minutes immediately before sundown.

Street-sprinklers will be charged at the rate of one cent for each and every thousand gallons of water used.

Slaughter-houses, from five to twenty dollars per annum, according to general business. Machinery taking water, extra, according to rates for stationary engines.

Swimming-baths, manufactories, paper-mills, or any other business requiring a large supply of water, will be required to use a meter, and will be charged at the rate of seven cents for each and every thousand gallons of water used.

## B.—REPORT OF THE AUDITOR AND COMPTROLLER.

OFFICE OF THE AUDITOR AND COMPTROLLER D. C.,  
*Washington, November 1, 1879.*

GENTLEMEN: I have the honor to submit the following report of receipts and expenditures of the District government for the fiscal year ending June 30, 1879.

The revenue of the District government during that time was—

Receipts from taxes, licenses, and miscellaneous sources on account of general expenses of the District of Columbia .....	\$1,555,386 57
Receipts on account of water department .....	69,053 67
Receipts on account of Washington special-tax fund .....	7,397 81
Receipts on account of Washington redemption fund .....	1,821 03
Receipts on account of redemption tax-lien certificate .....	2,345 94
Receipts on account of paving Pennsylvania avenue, act July 8, 1870 ..	768 05
Receipts on account of repaving Pennsylvania avenue, act July 19, 1876 .....	33,216 38
Receipts from Congressional appropriations on account of general expenses of the District of Columbia, act June 20, 1878 .....	1,250,000 00
Receipts on account of general expenses of the District of Columbia, deficiency act, March 3, 1879 .....	466,733 23
Receipts on account of filling grounds south of the Capitol, act February 10, 1879 .....	15,000 00
Receipts on account of medicines and medical attendance to poor .....	5,000 00
Receipts from late Commission government, being the balance on hand July 1, 1878, on account of general expenses of the District of Columbia .....	29,795 40
Receipts on account of water department .....	16,809 42
Receipts on account of Washington special-tax fund .....	6,860 38
Receipts on account of redemption fund .....	1,091 66
Receipts on account of redemption of tax-lien certificates .....	1,111 60
Receipts on account of redemption Pennsylvania avenue paving-strip, act July 8, 1870 .....	725 74
Receipts on account of redemption Pennsylvania avenue paving-strip, act July 19, 1876 .....	998 47
Receipts on account of assistant engineer's instrument account .....	40 00
Receipts on account of balance of Congressional appropriations for general expenses of the District of Columbia, deficiency act March 3, 1875 ..	292 31
Receipts on account of fire department, deficiency act June 22, 1874 .....	49
Receipts on account of filling grounds south of Capitol, act April 4, 1878 ..	295 00
Receipts on account of medicine and medical attendance to poor, act April 4, 1878 .....	3,322 37
Total receipts during the fiscal year .....	3,467,665 52

The expenditures during the same period were payments for general expenses of the District of Columbia—

On account of salaries and contingent expenses of the offices of the District of Columbia.....	172,600 30
On account of public schools.....	365,591 77
On account of Metropolitan police.....	295,761 53
On account of fire department and alarm, including two additional fire-engines.....	131,411 24
On account of health department.....	23,457 57
On account of police court.....	15,704 61
On account of judicial expenses.....	2,488 30
On account of institutions of charity, reformatories, &c.....	132,411 64
On account of streets, District of Columbia.....	271,064 00
On account of improvements and repairs.....	391,329 07
On account of constructing, repairing, and maintaining bridges.....	1,938 15
On account of miscellaneous and contingent expenses of the District of Columbia.....	24,072 07
On account of erection of new work-house at Washington Asylum.....	7,500 00
On account of interest on Linthicum Institute loan.....	2,751 69
On account of refunding erroneously-paid taxes.....	33,064 34
On account of judgment against the District of Columbia.....	34,146 57
On account of interest and sinking fund.....	1,155,583 55
On account of total general expenses.....	3,060,906 40
On account of water department, including erection of stand-pipe.....	82,686 08
On account of redemption of tax-lien certificates.....	2,047 62
On account of special-tax fund.....	8,286 73
On account of redemption Pennsylvania avenue paving-strip, act July 8, 1870.....	816 88
On account of redemption Pennsylvania avenue paving-strip, act July 19, 1876.....	33,307 56
On account of redemption tax-sale certificates.....	295 01
On account of medicines and medical attendance to poor, act April 4, 1878.....	3,322 37
On account of medicines and medical attendance to poor, act February 10, 1879.....	3,392 63
On account of filling grounds south of Capitol, act February 10, 1879 ..	14,985 77
Total expenditures during the fiscal year.....	3,210,047 05

#### RECAPITULATION.

Total receipts during the fiscal year.....	3,467,665 52
Total expenditures during the fiscal year.....	3,210,047 05
Balance in United States Treasury subject to requisition and draft, July 1, 1879.....	257,618 47
On account of general expenses of the District of Columbia.....	\$240,608 80
On account of water department.....	3,177 01
On account of Washington special-tax fund.....	5,971 46
On account of Washington redemption fund.....	2,617 68
On account of redemption of tax-lien certificates.....	1,469 92
On account of paving Pennsylvania avenue, act July 8, 1870.....	676 91
On account of paving Pennsylvania avenue, act July 19, 1876.....	907 29
On account of filling grounds south of Capitol, act February 10, 1879.....	14 23
On account of filling grounds south of Capitol, act April 4, 1878.....	295 00
On account of medicines and medical attendance to poor, act February 16, 1879.....	1,607 37
On account of general expenses of the District of Columbia, deficiency act March 3, 1875.....	292 31
On account of fire department, act June 22, 1874.....	49
On account of assistant engineer's instrument account.....	40 00
	257,618 47

The appropriations made by Congress for payment of one-half of the expenses of the District government (as provided for in the act of June 11, 1878) for the fiscal year ending June 30, 1879, were..... \$1,716,533 23

The receipts of the District government from taxes, licenses, and miscellaneous sources, including balance on hand July 1, 1878, collected and paid into the United States Treasury on account of general expenses of the District during said fiscal year, were..... 1,584,981 97

Balance uncollected at the end of fiscal year on account of appropriations for said year..... 131,551 26

From the end of the fiscal year to October 1, 1879, inclusive, the District government had collected and paid into the United States Treasury from the general taxes for the year 1879 the sum of \$134,865.08, of which amount the sum of \$131,551.26 should be covered into the Treasury to the credit of the appropriations for the fiscal year ending June 30, 1879, to make good the appropriations for said year, the full amount of general taxes for the year 1879 being included by the Commissioners of the District of Columbia in their estimate of the receipts of the District government for said year.

The balance on hand July 1, 1879, on account of general expenses of the District of Columbia for the fiscal year ending June 30, 1879, was..... \$240,608 80

The amount since collected from the general taxes for the year 1879, and to be covered into the United States Treasury to the credit of the appropriations for said year, is..... 131,551 26

Making total balance in the Treasury subject to requisition and draft on account of general expenses of the District government for the fiscal year ending June 30, 1879..... 372,160 06

The greater part of if not the entire balance thus remaining to the credit of the appropriations for said fiscal year will be required to meet the outstanding obligations and contracts of the District government for said year.

The expenses of the District government for the fiscal year ending June 30, 1879, have not exceeded the estimates submitted by the Commissioners of the District except in case of the Health Department, where a deficiency of \$1,183.34 exists by reason of expenses of the pond service, which were not specially provided for in the estimates, and of the Government Hospital for the Insane, where the expenses have exceeded the estimates by \$484.80. I respectfully ask that these deficiencies may be included in your estimates for the fiscal year ending June 30, 1881. The estimates by the Commissioners of receipts of the District government for the fiscal year ending June 30, 1879, have been substantially realized.

An examination of the accounts of the treasurer of the District shows that he has paid into the Treasury of the United States, as required by law, all moneys received by him, and fully accounted for the same.

I respectfully call your attention to the suggestions in my last report of the necessity of some provisions being made by Congress for the settlement of outstanding certificates of the Board of Audit and other valid claims against the District of Columbia, and also for refunding the license taxes paid on carts, wagons, and drays for the year commencing July 1, 1876, Congress having on the 12th of July of said year repealed the law imposing said taxes.

Applications have been made by holders of the twenty-year five per cent. coupon bonds of the District of Columbia to have them converted into registered bonds, and their requests could not be complied with for want of authority under the law to do it. I respectfully recommend that Congress be asked to so amend the act of June 10, 1879, authorizing the issue of said bonds, as to allow the coupon to be converted into registered bonds, and that the conversion be made through the Treas-

ner of the United States as Commissioner of the Sinking Fund of the District of Columbia, in like manner as is done in the District of Columbia 3.65 bonds.

The number of audits made during the year is 4,142, and of warrants drawn 19,771.

The estimated expenses of this office for the fiscal year ending June 30, 1881, is \$13,000.

For a more detailed statement of receipts and expenditures, see accompanying exhibits marked A and B.

Respectfully submitted.

JOHN T. VINSON,

*Auditor and Comptroller, District of Columbia.*

Hon. COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

#### APPENDIX B 1.

*Statement by the auditor and comptroller of the receipts of the District of Columbia, as reported by the treasurer, from July 1, 1878, to June 30, 1879.*

From whom and on what account received.	Detail.	Total.	Aggregate.
John F. Cook, collector:			
Special deposit account, Capitol and North O Street Railroad .....	\$1,676 09		
General fund, District of Columbia .....	1,490,697 97		
Water rents and tax .....	69,053 67		
Washington special-tax fund .....	7,397 81		
Washington redemption fund .....	1,821 03		
Redemption of tax-lien certificates .....	2,345 94		
Paving Pennsylvania avenue, act July 8, 1870 .....	768 05		
Repaving Pennsylvania avenue, act July 19, 1876 .....	33,216 38		
		\$1,606,976 94	
Northern market .....	6,018 37		
Eastern market .....	3,029 46		
Northeastern market .....	39 00		
Western market .....	4,318 09		
Western market (note account) .....	859 90		
Georgetown market .....	1,543 43		
		15,808 25	
Fines, police court .....	14,640 03		
Fines, criminal court .....	622 32		
		15,262 35	
Interest on bonds (Washington school fund) .....		3,623 08	
Peabody Library Association, fuel .....		34 71	
Moneys refunded on account transportation of paupers .....		209 32	
Rent of District property .....		1,345 00	
Building permits .....		3,620 00	
Produce permits .....		426 00	
Board of health (sale of vaccine virus, &c) .....		169 43	
Fees collected by the poundmaster .....		869 35	
James S. Wilson, late treasurer District of Columbia .....		3,393 69	
Sale of old material .....		1,095 80	
Balance of police apportionment for 1878 .....		6,939 15	
Sale of cartridges, &c., Metropolitan police .....		27 60	
Sale of haystacks for the year .....		2,376 08	
Costs in the "Strong case", received through District attorney .....		312 70	
Washington Market Company (franchise rental) .....		7,500 00	
Total amount received from taxes and revenue .....			\$1,669,989 45
From congressional appropriations:			
Act June 20, 1878, for expenses District of Columbia .....	1,250,000 00		
Act February 10, 1879, filling grounds south of Capitol .....	15,000 00		
Act February 10, 1879, medicines, &c., for the poor .....	5,000 00		
Act March 3, 1879, expenses District of Columbia (deficiency) .....	466,533 23	1,736,533 23	1,736,533 23
Grand total of receipts as reported by the treasurer .....			3,406,522 68

JOHN T. VINSON,

*Auditor and Comptroller, District of Columbia.*

OFFICE OF THE AUDITOR AND COMPTROLLER, DISTRICT OF COLUMBIA,  
Washington, D. C., October 20, 1879.

## 54 REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA.

## APPENDIX B 2.

*Statement showing the amount of expenditures on account of the government of the District of Columbia from July 1, 1878, to June 30, 1879.*

Title of accounts.	Detail.	Total.	Aggregate.	Grand aggregate.
DISTRICT OFFICES.				
Commissioners' office:				
Compensation of Commissioners.....	\$10,000 00			
Compensation of employes .....	8,091 00			
Contingent expenses.....	2,738 22			
Total for Commissioners' office .....		20,829 22		
Auditor and comptroller's office:				
Compensation of employes .....	18,118 48			
Contingent expenses.....	416 77			
Total for auditor and comptroller's office.....		18,535 25		
Attorney's office:				
Compensation of employes.....	9,012 00			
Contingent expenses.....	450 69			
Total for attorney's office .....		9,462 69		
Assessor's office:				
Compensation of employes .....	18,735 01			
Contingent expenses.....	2,015 42			
Total for assessor's office .....		20,750 43		
Collector's office:				
Compensation of employes .....	11,260 39			
Contingent expenses.....	2,046 61			
Total for collector's office .....		13,307 00		
Sinking-fund office:				
Compensation of employes.....	2,400 00			
Contingent expenses.....	426 85			
Rent of.....	450 00			
Total for sinking-fund office .....		3,286 85		
Coroner's office:				
Compensation of employes .....	1,800 00			
Contingent expenses.....	34 59			
Total for coroner's office .....		1,834 59		
Engineer's office:				
Compensation of employes .....	53,716 79			
Contingent expenses.....	5,265 71			
Total for engineer's office .....		58,982 50		
Inspectors of buildings' office:				
Compensation of employes .....	5,580 00			
Contingent expenses.....	231 40			
Total for inspectors of buildings' office .....		5,811 40		
Superintendents of assessments and taxes' office:				
Compensation of employes .....	6,445 50			
Contingent expenses.....	2,458 40			
Total for superintendents of assessments and taxes' office.....		8,903 90		
Treasurer's office:				
Compensation of employes .....	4,600 00			
Contingent expenses.....	259 85			
Total for treasurer's office .....		4,859 85		
Sundries:				
Compensation of inspector of gas and meters and assistant .....	3,000 00			
Compensation of sender of weights and measures.....	86 67			
Fuel for District offices .....	80 00			
Ice for District offices .....	574 54			
Gas for District offices .....	189 38			
Repairs to District offices .....	548 84			
Insurance of District offices .....	1,469 69			
Rent of District offices .....	87 50			
Total for sundries .....	5,800 00			
Aggregate for District offices .....		11,836 62		
Aggregate for District offices .....			\$178,400 30	

# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 55

Statement showing the amount expended, &c.—Continued.

Title of accounts.	Detail.	Total.	Aggregate.	Grand aggregate.
<b>METROPOLITAN POLICE.</b>				
Compensation of officers and employés .....	278,089 50			
Contingent expenses .....	8,323 30			
Fuel for .....	1,061 88			
Insurance on station-houses .....	46 60			
Rent of station-houses .....	5,821 45			
Repairs to station-houses .....	2,198 80			
Erection of station-houses .....	220 00			
Total for metropolitan police .....			295,761 53	
<b>PUBLIC SCHOOLS OF THE DISTRICT.</b>				
Compensation of officers and employés .....	289,072 79			
Contingent expenses .....	16,939 77			
Fuel for .....	8,513 78			
Repairs to school buildings .....	20,114 36			
Furniture for .....	3,175 13			
Insurance .....	1,940 98			
Rent of school rooms .....	25,834 96			
Total for public schools .....			365,591 77	
<b>FIRE DEPARTMENT AND ALARM.</b>				
Compensation of officers and employés .....	66,614 76			
Contingent expenses .....	16,070 89			
Repairs to engine-houses .....	184 49			
Fuel for .....	744 17			
Purchase of hose .....	3,300 00			
Insurance .....	148 72			
Total for fire department and alarm .....		87,063 03		
Two additional engine-houses, &c. ....		44,348 21		
Total for fire department, &c. ....			131,411 24	
<b>STREET LAMPS AND GAS.</b>				
Lighting, extinguishing, and for gas .....	112,918 24			
Repairs to street lamps .....	964 61			
Erection of street lamps .....	1,514 53			
Compensation of superintendent and lamp-lighters .....	2,573 41			
Contingent expenses, matches, &c. ....	48 94			
Total for street lamps and gas .....			118,019 73	
<b>MARKETS.</b>				
Compensation of market-masters .....	5,930 36			
Contingent expenses .....	3,281 79			
Rent of market site .....	400 00			
Insurance on Georgetown market .....	127 50			
Total for markets .....			9,739 65	
<b>HEALTH DEPARTMENT.</b>				
Compensation of employés .....	15,828 23			
Contingent expenses .....	6,744 34			
Rent of office .....	915 00			
Total for health department .....			23,487 57	
<b>INTEREST ON BONDED DEBT AND SINKING FUND.</b>				
Interest, &c. ....			1,155,583 55	
<b>CHARITIES AND CORRECTIONS.</b>				
Washington Asylum:				
Compensation of employés .....	9,886 13			
Contingent expenses .....	23,489 27			
Fuel for .....	1,760 82			
Insurance on .....	191 00			
Total for Washington Asylum .....		35,327 22		
Georgetown Asylum:				
Maintenance of inmates, &c. ....		1,583 00		



## 56 REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA.

Statement showing the amount expended, &amp;c.—Continued.

Title of accounts.	Detail.	Total.	Aggregate.	Grand aggregate.
CHARITIES AND CORRECTIONS—Continued.				
Police court:				
Compensation of employes.....	10,158 00			
Contingent expenses.....	2,523 36			
Rent of.....	1,700 00			
Marshal's fees.....	2,120 50			
Total for police court.....		16,501 86		
Sundries:				
Treatment of insane poor.....	12,789 73			
Transportation of paupers and conveying prisoners to workhouse.....	1,955 01			
Support of Reform School.....	27,656 68			
Payments to charitable institutions.....	11,100 00			
St. Ann's Infant Asylum.....	5,000 00			
National Association for the Relief of Colored Women, &c.....	5,000 00			
Columbia Hospital.....	12,000 00			
Industrial Home School.....	5,000 00			
Children's Hospital.....	15,000 00			
Total for sundries.....		95,501 42		
Total for charities and corrections.....			148,913 50	
IMPROVEMENTS AND REPAIRS.				
Compensation of laborers in engineer's department.....	58,683 65			
Compensation of supervisors of roads and employes.....	23,468 49			
Work on county roads.....	2,682 44			
Total for above.....		84,834 58		
Repairs by new pavements.....		299,285 02		
Repairs to concrete pavements.....		18,618 22		
New work on streets, including materials.....	16,077 31			
Materials for permit work.....	2,397 61			
Total for work and materials.....		18,474 92		
Repairs to sewers and laying laterals.....		16,892 60		
Repairs to Tiber Creek sewer.....		9,629 30		
New York avenue, B street, and White lot sewer.....		27,488 00		
Boundary street auxiliary sewer.....		11 57		
Cleaning Tiber sewer.....		929 44		
Repairs to pumps.....		2,498 61		
Parking commission.....		14,356 20		
Maintenance of bridges.....		1,007 09		
Rock Creek bridges.....		931 06		
Total for improvements and repairs.....			494,956 61	
MISCELLANEOUS EXPENSES.				
Books for registers of wills' office.....		73 00		
Cleaning streets and alleys.....		40,202 51		
Removal of garbage.....		11,152 37		
Remodeling of police court building.....		234 00		
Erection of workhouse at Washington asylum.....		7,500 00		
Hay scales.....		113 20		
Interest on Linticum Institute loan.....		2,751 69		
Damages.....		483 00		
Surveyor's fees.....		698 00		
Repairs to public stables, furniture, &c.....		1,024 32		
Rent of property yards.....		275 00		
Transfers of real estate.....		90 58		
Printing checks.....		262 40		
Taking down condemned property.....		27 50		
Insurance on District property.....		57 00		
Auctioneers' fees for selling real estate.....		50 00		
Payment of judgments.....		34,146 57		
General advertising.....		4,347 17		
Judicial expenses.....		2,488 30		
Refunding erroneously paid taxes, &c.....		33,064 34		
Total for miscellaneous expenses.....			139,040 95	
Aggregate expenses of District of Columbia for general purposes.....				3,060,904 40

# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 57

*Statement showing the amount expended, &c.—Continued.*

Title of accounts.	Detail.	Total.	Aggregate.	Grand aggregate.
WATER DEPARTMENT.				
Compensation of employes.....	39,969 68			
Contingent expenses.....	13,118 30			
Refunding erroneously paid water rents, &c.....	202 70			
Total for water department.....		53,290 68		
Erection of stand-pipe.....		29,395 40		
Total for water department and stand-pipe.....			82,686 08	
SPECIAL APPROPRIATIONS.				
Medicines and medical attendance to the poor. (Act of April 4, 1878).....		3,322 37		
Medicines and medical attendance to the poor. (Act of February 10, 1879).....		3,392 63		
Filling grounds south of the Capitol. (Act of February 10, 1879).....		14,985 77		
Total for special appropriations.....			21,700 77	
SPECIAL ACCOUNTS: TRUST FUNDS, &c.				
Redemption of tax-lien certificates.....		2,047 62		
Redemption of special-tax scrip.....		8,286 73		
Redemption of Pennsylvania avenue paving-scrip. (Act of July 19, 1876).....		33,307 56		
Redemption of Pennsylvania avenue paving-scrip. (Act of July 8, 1876).....		816 88		
Redemption of tax-sale certificates.....		295 01		
Total for specials, as above.....			44,753 80	
Aggregate for water department and special accounts.....				149,140 65
Grand aggregate of expenditures of the District of Columbia for fiscal year ending June 30, 1879.....				3,210,704 50

## C.—REPORT OF THE COMMISSIONER OF THE SINKING FUND.

OFFICE OF THE TREASURER OF THE UNITED STATES,  
Washington, D. C., November 12, 1879.

GENTLEMEN: I have the honor to inclose herewith an estimate of the amount required for the interest and sinking fund of the District, including the "water-stock" bonds, for the fiscal year ending June 30, 1881.

The amount estimated for the water-bonds is reimbursable from the water-fund, and is asked for in order that there may be no default in the payment of the interest and principal of these bonds.

Very respectfully,

JAS. GILFILLAN,  
*Treasurer of the United States, Ex-officio Commissioner  
of the Sinking Fund of the District of Columbia.*

Hon. COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

## 58 REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA.

## APPENDIX C 1.

*Estimates of appropriations required for the service of the fiscal year ending June 30, 1881, by the commissioners of the sinking fund of the District of Columbia.*

Detailed objects of expenditure and explanations.	Estimated amount which will be required for each detailed object of expenditure.	Amount appropriated for the current fiscal year ending June 30, 1880.
DISTRICT OF COLUMBIA.		
For interest and sinking fund, District of Columbia, appropriated per Stat. at L., vol. 20, p. 410 .....	\$1, 043, 742 75	
For interest and sinking fund for District of Columbia water-stock bonds, reimbursable from water-fund, per act of legislative assembly of the District of Columbia, approved July 20, 1871 .....	44, 610 00	
	1, 088, 352 75	\$1, 115, 583 55
NOTE.—This estimate does not cover the amount required for the sinking fund for the three-sixty-five District bonds, which is provided for in the permanent annual appropriation of March 3, 1879 (20 stat., 410). The face value of bonds to be purchased under that appropriation for the fiscal year 1881 is \$122,565.27, at an estimated market value of 91½, or \$114,840.80, which was the assumed rate at which the sinking fund for the loan in question will yield 4 per cent. per annum upon the investment.		

JAS. GILFILLAN,  
*Treasurer of the United States.*

## APPENDIX C 2.

## OFFICE OF THE TREASURER OF THE UNITED STATES,

*Washington, D. C., November 3, 1879.*

GENTLEMEN: I have the honor to call your attention to my letter of the 12th instant, inclosing estimates for the interest and sinking fund of the District of Columbia, in which the estimate for the water-bonds is made reimbursable from the water-fund; and to modify said estimates by striking out "reimbursable from the water-fund"—allowing the amount asked for for these bonds to form a part of the general expenses of the District, chargeable to the appropriation for interest and sinking fund District of Columbia.

Very respectfully,

JAS. GILFILLAN,

*Treasurer of the United States, Ex-officio Commissioner  
of the Sinking Fund of the District of Columbia.*

Hon. COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

## APPENDIX C 3.

OFFICE OF THE TREASURER OF THE UNITED STATES,  
*Washington, D. C., October 3, 1879.*

GENTLEMEN: I have the honor to state that the estimated expenditures of this office for the fiscal year ending June 30, 1881, will be as follows:

For clerical services .....	\$2, 400
For contingent expenses .....	300
Total .....	2, 700

Very respectfully,

JAS. GILFILLAN,  
*Treasurer of the United States, Ex-officio Commissioner  
of the Sinking Fund of the District of Columbia.*

Hon. COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

## D.—REPORT OF THE COLLECTOR OF TAXES.

COLLECTOR'S OFFICE, DISTRICT OF COLUMBIA,  
*Washington, D. C., October 15, 1879.*

SIRS: In accordance with request the following detailed exhibit of collections through this department for the fiscal year ending June 30, 1879, is presented.

Very respectfully,

JOHN F. COOK,  
*Collector of Taxes, District Columbia.*

Hon. COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

*Statement of receipts through the office of the collector of taxes of the District of Columbia for the year ending June 30, 1879.*

[illegible]

## Statement of receipts through the office of the collector of taxes of the District of Columbia, &amp;c.—Continued.

Date.	General tax for the year ending June 30, 1876.				General tax for the year ending June 30, 1875.				General tax for the year ending June 30, 1874.			
	City.	Georgetown.	County.	Total.	City.	Georgetown.	County.	Total.	City.	Georgetown.	County.	Total.
1876.												
July	\$2,827 61	\$14 96	\$936 13	\$3,778 70	\$3,208 82		\$545 39	\$5,754 41	\$5,868 17	\$18 33	\$24 87	\$5,911 37
August	1,180 96	5 88	219 09	1,405 93	2,137 86		80 24	2,218 10	1,304 06		55 10	1,373 28
September	3,781 41	476 03	1,468 31	5,725 75	2,708 53		489 92	3,376 92	2,286 58		386 52	2,685 66
October	1,941 27	436 92	211 15	2,589 34	3,006 71		102 41	3,109 12	726 49		72 16	831 88
November	867 40		64 40	931 80	1,517 00			1,517 00	673 95			673 95
December	970 62	15 45	135 78	1,121 85	1,650 43		1 80	1,652 23	462 49		87	463 36
1875.												
January	443 68	94 70		538 38	496 82			496 82	331 40	58 34		389 74
February	928 97		7 22	936 19	1,242 55		6 80	1,249 35	878 71		4 22	882 93
March	372 42		2 63	375 05	321 63			321 63	299 94	29 63		329 57
April	1,552 54		70 79	1,623 33	665 37		14 62	679 99	388 36		11 87	400 23
May	1,239 72	25 69	7 43	1,272 84	1,511 20		15 66	1,526 86	749 16		14 33	763 49
June	446 18	187 21	3 55	636 94	499 17			499 17	386 16			386 16
Total	16,522 88	1,256 84	3,126 48	20,906 20	20,056 09		1,257 04	21,313 13	14,305 47	216 21	569 94	15,091 62

Date.	Redemption tax lien certificates.				Miscellaneous items.				Permits.				Fees for certifi-				Water, main				Water, later-				Water fund.				Repairing con-				Reimbursing ac-				count for laying				road tracks.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	1873.	1872.	Total.	Licenses.	Arrears corp. Wash- ington.	Special.	Paving Pennsylvan- ia avenue.	Dog-tax.		Pees for certifi-																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							

## Statement of receipts through the office of the collector of taxes of the District of Columbia, &amp;c.—Continued.

Date.	Miscellaneous items.		Advertisements.				Miscellaneous items.			Deposits on account May 10, 1879.	Hay scales.	Conscience fund.	Party wall, Franklin engine-house.	Sale of moulting sand back street, Georgetown.	Material furnished.	Erroneous tax liens received and applied to tax for the years 1876 and 1877.	Totals.
	Auctioneers' returns.	Improvements & street cleaning.	1875.	1876.	1877.	1878.	1879.	Redemption tax sales.	From tax sales August 13, 1878.	Repairing rail-road track.							
1878.																	
July.....	.....	.....	\$177 16	\$52 99	\$76 19	\$4 20	.....	\$45 09	.....	.....	.....	.....	.....	.....	.....	.....	\$100,322 78
August.....	.....	.....	\$80 03	\$39 15	61 39	\$15 90	.....	.....	\$175 32	.....	.....	.....	.....	.....	.....	.....	59,808 56
September.....	.....	.....	288 64	78 00	66 56	45 68	.....	.....	137 69	\$26 00	.....	.....	.....	.....	.....	.....	121,068 73
October.....	.....	.....	200 64	27 19	22 49	52 50	.....	.....	252 30	.....	\$15 00	.....	.....	.....	.....	.....	33,909 28
November.....	.....	.....	74 97	17 40	18 68	52 55	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7-3,918 32
December.....	.....	.....	81 36	26 15	28 45	44 30	.....	.....	.....	.....	.....	\$25 00	.....	.....	.....	.....	59,350 41
1879.																	
January.....	27 80	.....	55 55	18 24	23 11	37 68	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	83,948 96
February.....	267 29	.....	100 17	21 87	12 49	17 60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28,758 17
March.....	95 31	.....	28 56	7 50	9 38	17 88	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	39,487 07
April.....	.....	.....	59 84	22 65	21 48	26 23	\$164 39	27 32	.....	.....	.....	.....	.....	.....	.....	.....	61,747 41
May.....	.....	.....	70 56	18 05	28 23	47 00	12 84	.....	.....	\$1,748 62	13,913 70	.....	\$262 69	.....	.....	.....	181,738 23
June.....	26 39	.....	25 83	10 35	13 17	21 00	.....	.....	.....	.....	.....	.....	.....	24 00	1 50	\$34 15	54,977 70
Total.....	490 77	21 50	1,243 31	339 54	381 62	382 52	177 23	72 41	865 31	26 00	15 00	25 00	262 69	50 50	4 50	34 15	1,610,327 62

Of the above total amount collected by the District of Columbia through this office, the following amounts were received on account of trust funds, and for other departments, and are held subject to their demands, namely:

To amount on account of redeemed tax-lieu certificates paid out under acts of the legislative assembly approved June 25 and June 26, 1873.....	\$2,345 94
To amount on account of special taxes of the late corporation of Washington.....	7,397 81
To amount on account of paying Pennsylvania avenue under act of Congress approved July 8, 1870.....	7,708 05
To amount on account of repaving Pennsylvania avenue under act of Congress approved July 19, 1876.....	33,216 38
To amount on account of redemption of tax sales.....	2,686 34
To amount on account of laying pavement adjacent to railway tracks of North O and South Washington Street Railway Company.....	1,676 09
	48,090 61

There is also included in this general amount the sum of \$3,350.68, being the audited amount of erroneously issued tax-liens received on account of taxes under act of Congress approved February 27, 1879.

The treasurer and assessor for the District of Columbia reported, July 10, 1879, the following amounts of arrearages of general or annual taxes, to wit:

On account of Washington City, from January 1, 1845, to June 30, 1879, inclusive.....	\$1,046,035 30	
On account of Georgetown, from July 1, 1871, to June 30, 1879, inclusive .....	73,705 21	
On account of Washington County, from January 1, 1868, to June 30, 1879, inclusive .....	173,482 15	
Total, real .....		\$1,293,222 66
On account of personal tax for Washington City for the year ending June 30, 1877....	\$49,971 18	
On account of personal tax for Washington City for the year ending June 30, 1878....	93,158 16	
On account of personal tax for Washington City for the year ending June 30, 1879....	63,050 49	
		206,179 83
On account of personal tax for Georgetown for the year ending June 30, 1877 .....	7,595 14	
On account of personal tax for Georgetown for the year ending June 30, 1878 .....	8,745 92	
On account of personal tax for Georgetown for the year ending June 30, 1879 .....	8,427 75	
		24,768 81
On account of personal tax for Washington County for the year ending June 30, 1877.	2,119 17	
On account of personal tax for Washington County for the year ending June 30, 1878.	1,944 41	
On account of personal tax for Washington County for the year ending June 30, 1879.	3,380 36	
		7,443 94
Total, personal.....		238,392 58
Grand total.....		1,531,615 24

Since this statement of arrearage was prepared there has been collected, to date, \$260,000, of which amount upwards of \$100,000 was received in drawback certificates, issued under act of Congress approved June 29, 1879, and erroneously issued tax liens, received under act of Congress approved February 27, 1879.

Much of this amount of arrearage of taxes is based on property, real and personal, whose liability to taxation is disputed; of this class a notable instance, for example, among others, is that of the Baltimore and Ohio Railroad Company, whose tax arrearage is included and amounts to about \$75,000, less interest, cost for advertising, &c. A number of the banks of the District of Columbia claim immunity from taxation of personal property, which, with the arbitrarily imposed assessments on personal property, constitute nearly 90 per centum of this personal tax arrearage account.

You are requested to cause an examination of this arrearage account, with a view of adjusting and determining the value and amount of your assets, and eliminating whatever should not be carried forward as a debit against the collector, and, moreover, presenting a fairer view of the status of our district property.

As above stated, upwards of \$100,000 of this tax arrearage has been abated by drawback certificates issued under act of Congress approved



June 29, 1879. The first credit of this kind was not made until July 26, 1879, about one month after the passage of the act whose most advantageous privilege was limited by October 1, 1879, and, owing to the necessary delay in adjusting accounts, the issue of these drawbacks has been comparatively slow, otherwise much more of these tax arrears would have been paid, and many have lost thereby a fair and equal opportunity of discharging their tax obligation under its best provision. A renewal of this privilege with 6 per centum interest, instead of penalties and other accrued costs, is recommended to your consideration.

Your attention is called to the necessity of securing some additional legislation whereby the act entitled "An act to create a revenue in the District of Columbia, by levying a tax on all dogs therein, to make such dogs personal property, and for other purposes," may not be rendered inoperative, it having been decided recently in the police court that the law does not provide for criminal procedure in the event of failure to pay the tax. It is therefore left to the collector to distrain as provided in other cases of tax delinquency, and, as the greater percentage of dogs is owned or kept by persons whose personal property would be exempt, the mere seizure of dogs and selling them to meet the tax and the expense attending the enforcement of the collection thereof, would be a barren performance of duty. As will be seen from the above exhibit of receipts, the revenue derived from taxes on dogs in the District of Columbia, for the year ending June 30, 1879, amounted to \$10,505.12. There has been received on account of the current year's tax \$8,364; but since the decision referred to has been rendered that said court cannot punish the owner or possessor of a dog criminally for failure to attach a tax-tag, or, in other words, the failure to pay the tax imposed by law, there has been little, comparatively little, collected.

The following is a statement of the transfers of stock of the late corporation of Washington and Georgetown, D. C., made in accordance to act of the legislature approved August 23, 1871:

## WASHINGTON STOCK.

*Six per centum quarterly.*

1878.			
July	3.	Cammack, Edward and John, from the estate of William Cammack .....	\$1,325 00
	5.	Gordon, William A., from H. E. Offley, trust .....	114 00
	25.	Saint Joseph Benevolent School of the Visitation, by Mary Olympia Fulton, from Saint Joseph's Benevolent School of the Visitation .....	600 00
		Young, James R., from J. R. Young .....	600 00
Aug.	7.	Lynch, Miss Mary, from estate of Ambrose Lynch .....	6,200 00
		Stellwagen, Eliza S., from the same (division) .....	500 00
		Johnson, Lewis, & Co., from Eliza S. Stellwagen .....	1,000 00
	17.	Martin, Emma J., by Thomas Nottingham, executor .....	2,000 00
	24.	Getty, Mrs. Eliza C., from Lewis Johnson & Co .....	400 00
		Johnson, Lewis, & Co., from the same (division) .....	200 00
	29.	Montgomery, Julia A., from Lewis Johnson & Co .....	600 00
		Johnson, Lewis, & Co., from the same (division) .....	400 00
Sept.	13.	Gray, Mrs. Mercy M., from S. M. Pool, by attorney .....	1,300 00
		Gray, Mrs. Mercy M., from Lewis Johnson & Co .....	600 00
Oct.	4.	Gray, Mrs. Mercy M., from S. M. Pool, by attorney .....	100 00
		Montgomery, Mrs. Julia A., from S. M. Pool, by attorney .....	100 00
		Johnson, Lewis, & Co., from S. M. Pool, by attorney .....	300 00
		Johnson, Lewis, & Co., from H. E. Offley, trust .....	10 00
	7.	Jauneey, Ellen, from Ellen E. Janney .....	700 00
	8.	Johnson, Lewis, & Co., from Alice S. Yoe .....	700 00
		Yoe, Alice S., from the same (division) .....	2,200 00
		Morgan, Edwin Lee, from Evelina P. Morgan, guardian .....	1,700 00
	11.	Middleton, D. W., from Elizabeth Ann Koonen .....	100 00

	14.	Gray, Mrs. Mercy M., from Joseph H. Bradley.....	1,000 00
		Johnson, Lewis, & Co., from Joseph H. Bradley.....	4 00
	26.	Carter, Miss Jessie M., from Lewis Johnson & Co.....	1,000 00
		Johnson, Lewis & Co., from the same (division).....	10 00
Oct.	29.	Upshur, Mrs. Columbia W., from J. B. Blake.....	1,100 00
		Johnson, Lewis, & Co., from J. B. Blake.....	20 00
	30.	Upshur, Columbia W., from Bettie Williams.....	300 00
Nov.	4.	Fulmer, Elizabeth S., from estate of Mary N. Fulmer.....	800 00
Dec.	6.	Fuller, Jennie D., from estate of T. J. D. Fuller.....	667 00
		Fuller, William D., from estate of T. J. D. Fuller.....	667 00
		Fuller, Thomas J. D. (infant), from estate of T. J. D. Fuller.....	666 00
		James, Charles A., from Laura M. Jones.....	150 00
	14.	Maddox, William M., from William M. Maddox, guardian.....	473 00
1879.			
Jan'y	4.	Smith, Mrs. Wilhelmine M. Easby, from estate of Agnes M. Easby.....	1,900 00
	7.	Johnson, Lewis, & Co., from R. W. Burche, guardian.....	200 00
	8.	Carlisle, Calderon, guardian, from estate of James M. Carlisle.....	100 00
	11.	Riggs & Co., from Saint Vincent Orphan Asylum.....	237 00
		Fuller, W. D., from Saint Vincent Orphan Asylum.....	1,333 00
	15.	Carter, Martha Custis Williams, from Lewis Johnson & Co.....	214 00
	20.	Carter, Martha Custis Williams, from Eliza S. Stellwagen.....	500 00
	23.	Carter, Martha Custis Williams, from Riggs & Co.....	237 00
	30.	Drain, Francis Patrick, from estate of Margaret Ward.....	800 00
Feb'y	5.	Greenwell, Alfred B., from Barbour & Hamilton.....	1,000 00
	18.	Riggs & Co., from James M. Wright.....	1,900 00
April	1.	Rowan, Stephen C., from Menard Menke.....	1,000 00
		Olley, Holmes E., from Menard Menke.....	2,000 00
	2.	Middleton, D. W., from Riggs & Co.....	700 00
		Lipscomb, Miss S. A., from Riggs & Co.....	1,200 00
		Smith, Miss Jane L., from estate of Rev. John C. Smith.....	3,470 00
	5.	Adams, Thomas, guardian of James Barry Adams, from the estate of James Adams.....	850 00
		Adams, Miss Alice M., from the estate of James Adams.....	850 00
	7.	Riggs & Co., from Saint Vincent Orphan Asylum.....	850 00
		Saint Joseph's Benevolent School of Visitation, by its manager, &c., from Saint Joseph Benevolent School, &c.....	600 00
		Tyson, Elizabeth E., from Annie Enwright.....	250 00
	9.	Carter, Martha Custis Williams, from Riggs & Co.....	105 00
		Tyson, Elizabeth E., from Riggs & Co.....	50 00
		Olley, Holmes E., from Riggs & Co.....	695 00
	14.	Rowan, Stephen C., U. S. N., from H. E. Olley.....	1,000 00
	16.	Olley, Holmes E., from H. J. Anderson.....	1,150 00
	24.	Davis, H. F., from H. E. Olley.....	1,000 00
May	3.	Johnson, Lewis, & Co., from William Henry Otterback.....	500 00
	6.	Mackall, Benjamin F., from Lewis Johnson & Co.....	500 00

*Five per centum quarterly.*

1878.			
March	4.	Woodbury, Coryton M., from the estate of Ann E. Childs.....	200 00
April	5.	Adams, Thomas, guardian of James Barry Adams, from the estate of James Adams.....	50 00
		Adams, Miss Alice M., from the estate of James Adams.....	50 00

*Chesapeake and Ohio Canal stock.—Six per centum, semi-annual.*

1878.			
July	3.	Cammack, Edward and John, from the executors of the estate of William Cammack.....	1,400 00
	29.	Phillips, George W., from John D. McPherson, trust.....	100 00
Aug.	7.	Lynch, Miss Mary, from the estate of Ambrose Lynch.....	1,600 00
Oct.	7.	Janney, Ellen, from Ellen E. Janney.....	200 00
Dec.	7.	James, Charles A., from Laura M. Jones.....	50 00
1879.			
Jan.	4.	Olcott, Henry A., from Bryan & Bro.....	200 00
	7.	Johnson, Lewis & Co., from R. W. Burché, guardian.....	800 00
	8.	Carlisle, Calderon, guardian, from estate of J. M. Carlisle.....	600 00
	25.	National Metropolitan Fire Insurance Company of the District of Columbia, from the estate of Henry Bradley.....	700 00
	15.	Johnson, Lewis & Co., from the same (division).....	300 00

		Marbury, John, jr., trustee of estate of Ann V. Ogle, from Lewis Johnson & Co.....	500 00
		24. Mackall, Charles, from Lewis Johnson & Co.....	300 00
Feb.	3.	Johnson, Lewis & Co., from Harriett J. Bennett.....	750 00
	5.	Thompson, William, from William E. Greenwell.....	400 00
	12.	Davis, Henry F., from Lewis Johnson & Co.....	750 00
April	3.	Smith, Jane L., from the estate of Rev. John C. Smith.....	670 00
	5.	Adams, Thomas, guardian of James Barry Adams, from the estate of James Adams.....	100 00
		Adams, Miss Alice M., from the estate of James Adams.....	100 00

## GEORGETOWN STOCK.

*Six per centum, quarterly.*

1878.			
July	3.	Offley, H. E., trustee, from Walter S. Cox.....	1,900 00
	8.	Rowan, S. C., United States Navy, from H. E. Offley, trustee....	520 00
		Offley, H. E., trustee, from Lewis Johnson & Co.....	544 06
	31.	Phillips, Susan V., from H. E. Offley, trust.....	47 60
		Offley, H. E., trust, from the same (division).....	132 40
Aug.	6.	Marsh, Ella M., from Laura A. Williams.....	100 00
		Williams, Laura A., from the same (division).....	400 00
Sept.	10.	Griffith, Mrs. Emily E., from H. E. Offley, trust.....	1,250 00
Oct.	4.	Gray, Mrs. Mercy M., from H. E. Offley, trust.....	146 46
	23.	Page, Thomas, from Catherine Magruder, trust.....	1,880 00
Nov.	7.	Upshur, Mrs. Columbia W., from Lewis Johnson & Co.....	100 00
		Lewis Johnson & Co., from the same (division).....	46 46
	15.	Green, Susanna R., from A. H. Pickerell, guardian.....	1,200 00
		White, George H. B., from A. H. Pickerell, guardian.....	433 67
Dec.	9.	Mackall, Benjamin F., from G. H. B. White.....	433 67
1879.			
Jan'y	8.	Mackall, Benjamin F., from Lewis Johnson & Co.....	46 46
		Carter, Martha Custis Williams, from George Peter.....	945 91
	20.	Schoolfield, Effie W., from estate of D. English.....	725 00
		English, Cox & Dodge in trust, from estate of D. English.....	96 00
	24.	National Metropolitan Bank of Washington, D. C., from Emily E. Griffith.....	1,250 00
Feb.	3.	Johnson, Lewis & Co., from Harriet J. Bennett.....	1,073 93
	12.	Davis, Henry F., from Lewis Johnson & Co.....	1,073 93
	14.	Carter, Mrs. Martha Custis Williams, from M. C. Williams.....	816 50
March	6.	Davis, Henry F., from Laura A. Williams.....	400 00
April	2.	Smith, Mrs. Jane L., from the estate of Rev. John C. Smith.....	2,000 00
	7.	Laub, Mrs. Anne Eliza, guardian of Neenah Tipton, from Thomas Page.....	840 00
		Gordon, William A., from Thomas Page.....	40 00
		Page, Thomas, from the same, (division).....	1,000 00
June	9.	MacLeod, Elizabeth, from C. C. Glover, attorney, (correct).....	900 00
	20.	Kenny, Margaret, from Adolphus Pickrell, trust, Caroline S. Risque.....	600 00

*Market-house stock.—Six per centum, quarterly.*

1878.			
July	31.	Phillips, Susan V., from Nannie Walsh.....	552 40
Aug.	31.	Johnson, Lewis & Co., from H. L. Offutt.....	1,975 00
Sept.	9.	Brooks, Mary, from Lewis Johnson & Co.....	75 00
	13.	Gray, Mrs. Mercy M., from Lewis Johnson & Co.....	1,900 00
Oct.	9.	Laub, Mrs. Anne Eliza, from Nannie Walsh.....	552 40
1879.			
March	19.	Laub, Mrs. Anne Eliza, guardian of Neenah Tipton, from Clara M. Noyes.....	552 40

*Bounty stocks.—Six per centum, quarterly.*

1878.			
Sept.	13.	Gray, Mrs. Mercy M., from Jessie M. Carter.....	1,000 00
1879.			
Feb.	14.	Carter, Mrs. Martha Custis Williams, from M. C. Williams.....	590 00

# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 67

## RECAPITULATION.

Washington 6 per cent.....	\$54,397 00	
Washington 5 per cent.....	300 00	
Chesapeake and Ohio Canal 6 per cent.....	9,520 00	
		\$64,217 00
Georgetown six per centum.....	21,092 05	
Georgetown market-house six per centum.....	5,607 20	
Georgetown bounty six per centum.....	1,590 00	
		28,289 25
Total.....		92,506 25

*Estimate of amount required for support of office for fiscal year ending June 30, 1880.*

Salaries :		
Collector.....	\$4,000 00	
One clerk.....	1,700 00	
One clerk.....	1,500 00	
One clerk.....	1,200 00	
One clerk.....	960 00	
One clerk.....	921 00	
One messenger.....	600 00	
Temporary employes.....	500 00	
		\$11,381 00
Other expenses :		
Stationery.....	2,000 00	
Contingent.....	1,000 00	
		3,000 00
		14,381 00

Respectfully submitted.

JOHN F. COOK,  
*Collector of the District of Columbia.*

## E.—REPORT OF THE TREASURER AND ASSESSOR.

OFFICE OF TREASURER AND ASSESSOR, DISTRICT COLUMBIA,  
*October 10, 1879.*

GENTLEMEN: I have the honor to make the following report of the transactions of this office for the fiscal year from July 1, 1878, to June 30, 1879:

### TREASURER'S BRANCH.

#### *Receipts.*

From tax-collector:	
For general taxes.....	\$1,413,495 96
For licenses.....	111,813 93
For water fund.....	68,907 76
From school fund, interest on \$60,385 corporation stock.....	3,623 08
“ building permits.....	3,620 00
“ Washington Market Company on account rents.....	7,500 00
“ Western Market, rents.....	4,318 09
“ Northern Market, rents.....	6,018 37
“ Eastern Market, rents.....	3,029 46
“ Northeastern Market, rents.....	39 00
“ Georgetown Market, rents.....	1,540 43
“ assistant attorney, District Columbia, fines, &c., collected.....	1,702 12
“ attorney, District Columbia.....	312 70
“ police court, fines in United States cases.....	4,776 07
“ police court, fines in District Columbia cases.....	8,247 62
“ sundry rents, hay scales, &c.....	2,701 08
“ bills receivable, Western Market notes.....	859 90
“ Metropolitan police trust fund.....	6,291 89

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From United States marshal, criminal court fines.....	622 32
" collections by W. A. Cook, late district attorney .....	700 00
" Peabody library, for fuel, at Curtis school building .....	34 71
" produce-dealers' permits .....	370 00
" licenses forfeited .....	56 00
" on account claim vs. J. S. Wilson .....	3,393 69
" board of health .....	165 08
" health office .....	1,098 70
" fine paid by J. W. Collins .....	12 22
" sales of old material by superintendent property .....	978 22
" sales at Washington Asylum .....	117 58
" sales of Metropolitan police badges .....	15 00
" refund by Metropolitan police commissioners .....	6,951 75
" refund by J. Connell, unexpended balances on transportation of paupers .....	85 65
" refund by superintendent property, freight on engines .....	97 00
" refund by J. Coburn for salary .....	10 65
" refund by Commissioners District Columbia, account with Reed..	2 52
" refund by auditor, account of audit .....	1 00
" refund salary of J. Lockwood, water registrar's office.....	12 50
Total receipts.....	1,663,522 05

All these receipts were paid into the Treasury of the United States, as required by law.

## LICENSES

to the number of 2,647 were issued, amounting to the sum of \$111,813.93, which was paid in as follows:

By apothecaries.....	\$485 68
By auctioneers .....	2,277 13
By banks and bankers.....	286 25
By bill-posters .....	20 00
By brewers .....	300 00
By balls, &c., and circuses.....	1,614 00
By book agents .....	272 43
By claim agents.....	412 50
By cattle brokers .....	166 67
By commission merchants .....	1,593 36
By commercial agents.....	20,058 61
By dealers in liquor, wholesale .....	9,567 14
By dealers in liquor, retail .....	48,408 59
By dealers in old barrels .....	77 50
By billiard and other tables .....	1,323 91
By hotels .....	2,331 76
By ice companies.....	34 00
By insurance companies .....	5,946 50
By junk dealers .....	1,455 04
By livery stables .....	1,756 17
By manufacturers of gas.....	1,592 50
By notaries public .....	880 00
By pawnbrokers .....	1 500 00
By photographers .....	466 68
By produce dealers .....	3,024 92
By peddlers .....	862 28
By restaurants.....	3,143 53
By hacks, cabs, &c.....	1,556 78
By theaters .....	400 00
Total.....	111,813 93

It will be observed that there was a considerable increase in several items above, over those of the preceding year, justly attributable, as I think, to the energy of the "inspector of licenses," who was appointed by you in December last. I respectfully recommend that his office be made permanent and the salary increased.

# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 69

## ASSESSMENT BRANCH.

*Statement of the real estate of the District of Columbia on the 30th of June, 1878, after the correction of the books.*

### Washington:

Taxable.....	\$74,753,499	
District of Columbia.....	1,005,700	
Exempt from taxation.....	4,015,076	
United States.....	78,941,567	
		\$158,715,842

### Georgetown:

Taxable.....	5,076,256	
District of Columbia.....	99,345	
Exempt from taxation.....	349,152	
United States.....	72,427	
		5,597,180

### Washington County:

Taxable.....	6,574,184	
District of Columbia.....	34,499	
Exempt from taxation.....	811,259	
United States.....	3,142,580	
		10,562,522

Total ..... 174,875,544

To this add the assessed value of new improvements, after deducting the value of the old demolished—

In Washington, 656 houses.....	\$830,950
In Georgetown, 69 houses.....	322,250
In county, 131 houses.....	88,150
	1,241,300

and the assessed value of real estate in the District on 30th June, 1879, is \$176,116,894, of which \$87,645,289 is taxable. (See Table E 1.)

## AMOUNT OF TAX FOR 1879-'80.

Washington City, \$76,085,940, at \$1.50.....	\$1,141,289 10
Georgetown, \$5,291,313, at 1.50.....	79,369 70
County, \$2,248,485, at \$1.50.....	33,727 27
County, \$4,354,618, at \$1 (agricultural).....	43,546 18
	77,273 45

Total tax ..... 1,297,932 25

(See Table E 9.)

The amount of exempt, District and United States, property for 1879 is given in the table the same as in the table of 1878, as this office has not had time to prepare this valuable table for this report.

## ARREARS OF TAXES.

The arrearages of general taxes on 30th of June, 1879, was \$1,293,222.66 (see Tables E 2, E 3, E 4, and E 5), and arrearages of personal tax on 30th June, 1879, was \$238,292.58 (see Tables E 6 and E 7). Total amount of arrears of taxes, \$1,531,515.24.

## PERSONAL TAX.

The large amount of uncollected personal taxes (\$238,292.58) is fully as much as the whole annual assessment, voluntary and arbitrary, and there seems to be no prospect of its collection.

Many persons make an annual return, and proclaim at the same time

that it is done only to avoid the 50 per cent. fine, and that they do not propose to pay the tax, for the reason that so much is outstanding and so many of their friends and other citizens have heretofore paid no attention to the law, or have in some way evaded it. It is believed that all good citizens are willing to pay just taxes.

All visible property can readily be reached, but when men of known wealth hide their property by temporary investment in exempted stocks or bonds, or buy themselves in debt upon a margin, their fellow-citizens, who make honest returns, are thus paying a double share of taxes, and the law becomes unjust and inoperative.

All business which requires a changeable capital should be *licensed*, as it is impossible to get the amount of stock anywhere near right for taxation. Clause 20 of Section 21 of the license laws, which was repealed, should be re-enacted, and this class, at least, of personal property, be released from taxation.

It would seem to be just and proper that *loans upon real estate should not be taxed*.

To illustrate the injustice of a tax upon deeds of trust, take the following example:

A buys a house from B for his friend C, conditioned upon his paying him the interest on the cost of the purchase, and the annual taxes. While the property so remains, B pays (on the purchase money he received) a personal tax of one and one-half per centum, and C, by agreement, pays on the house the annual real-estate tax of one and one-half per centum. But, fearing some accident to A, C obtains from him a title deed, by giving his note for the cost, and a deed of trust to secure its payment. A receives no more interest than he did before, and requires C to pay the personal tax on the note. This note simply represents a change of title from A to C, and yet it must pay the same tax as if it had real value. The house then (through C, the owner,) pays a double tax.

Again, A has a sum of money on which he pays a personal tax. He lends it to B on his house, and takes a note and deed of trust as security. The money still pays a personal tax in the hands of B, or some one else, and so does the note in the hands of A, and he must continue to pay it until the money comes back to him, and the note is canceled. There is no real value in the note; it simply represents the money while it is out of A's hands. The money and the house are the real values for taxation, and not all the notes that can be made will add anything to what now exists. For, A's money might go from B to C, and from C to D, and so on through the alphabet, each taking a note and deed of trust. The money in the hands of the last holder, Z, earns what is paid for taxes and interest, and each note is paid off in succession by it, until it reaches A, the original and real owner of the money. Certainly, it cannot be admitted that each of these deeds of trust notes should pay a tax, and yet the law now requires it.

This tax is a prohibition upon the introduction of foreign capital, and in most cases the interest demanded is higher to the extent of the tax than it otherwise would be.

Tax-payers whose personal property is invisible, fail to communicate with the assessor, either from love of gain or to avoid publicity of their affairs. The arbitrary assessments which encumber our tax-books are a sad commentary upon the inefficiency of our personal-tax laws.

The assessment for 1880 on personal property is \$11,421,431. Tax, \$171,321.47. (See Table E 8.)

## RELIEF OF DELINQUENT TAX-PAYERS.

The late act of Congress, which reduced the rate of interest to 6 per cent. in lieu of all penalties, &c., has been of infinite relief to our overburdened tax-payers, and has brought into the treasury a large amount of arrears of taxes.

The State of New York has recently reduced the rate of interest to six per cent., and this is the rate adopted for all arrears of taxes. Capital now can hardly realize, with safety, more than five or six per cent., and persons who are able to pay will not be deterred from doing so by the low rate of interest charged upon delinquent taxes.

I recommend that the rate of six per cent. be made here upon *all* delinquent taxes, still retaining the five per cent. discount for prompt payment.

The tax-books are now, and have for some time been, in the hands of the collector for the purpose of making up the list of unpaid taxes for advertisement in November. I do not think these books should ever be out of the possession of this office, for the reason, among others, that the accounts cannot be posted daily, which should always be done, and thus avoid the duplicate payments which are constantly being made.

The annual sale of property for unpaid taxes does not seem to reach the difficulty we have in collecting them. If the property is bought in by the District—which is generally the case—there is only an additional expense to the poverty-stricken owner, who would, no doubt, pay the tax before this accumulation if he could do so. If the purchase is made by a citizen, it is rarely parted with by him without an exorbitant charge for relinquishment. Still I am not prepared to make any suggestion for a proper remedy.

Daily duplicate statements should be made to this office by the collector of taxes of every item of receipts, so that we should be without excuse for any delay in posting every account. Many errors would in this way be avoided or immediately corrected. It is my duty to call your attention to the following: The Baltimore and Ohio Railroad Company are assessed for 1880 on real estate in the city, \$214,991; in the county, \$160,486, in all \$375,477, a tax of \$5,632.16. This company has never paid taxes on its real or personal property, and it stands charged on the tax-books with \$75,574 of general taxes, to which are to be added interest and penalties. In estimating revenue for 1880 this tax should be omitted.

There is also an enormous amount of property carried on the tax-books assessed to educational, benevolent, &c., associations, upon which no tax is ever paid, until it is desired to sell or mortgage, when the desired quantity is relieved.

It is hoped that speedy legislation will be had to cause the taxation to fall equally upon all.

## CHURCH AND SCHOOL PROPERTY.

The law in relation to exemptions for school and church purposes is not as clearly defined as it might be, and perhaps it might be bettered by allowing only a certain number of feet for any location, beyond which there should be no exemption. A church, to be exempt, should be erected for that purpose and used for no other. A school-house should only be exempt where no revenue is derived, or no charge is made for tuition, and the house used for no other purpose than educational.



## RIVER FRONT.

There is a large amount of property (buildings and wharves) on the river front below the Long Bridge, which has heretofore escaped taxation. The ground is beyond the limits of the original squares; it has been redeemed from the river and built upon by parties who have no title. No revenue is derived from the wharves.

The question ought to be settled by Congress as to its ownership. The amount involved is probably over \$500,000, of which the houses, worth \$25,000, should at least pay a personal tax.

The present rentals of this property, received by individuals, amount to some \$25,000 to \$30,000, annually.

I would also beg to advert to my communication of June 10, 1879, in relation to the forty-five feet of ground on the north side of B street, northwest, between Seventh and Fifteenth streets. The title to this property you then considered to be in the United States. The parties who hold possession are retaining it, in many cases, for the location of rubbish, and it is an eye-sore to that part of the city.

It seems to me that the general government might be induced to place the title in the present owners, in order that it may be properly used, improved, and assessed.

## NEW ASSESSMENT.

Real estate values have not yet become sufficiently stable to justify a new assessment the coming year, but authority should be obtained to correct some glaring errors and incongruities in the assessment of 1878-79.

Owing to some incompetent men having been sent out to assess property, many mistakes have been made in locating buildings and in assessing values; in some cases one side of a street being assessed at one-third or one-half less than the other, when the values on both sides of the street are the same.

When it is considered that most of these men are of limited education and their pay almost nothing, and that they have the duty of assessing so valuable and various kinds of property, it is not wonderful that their work is so imperfectly done.

In order to a better performance of this highly responsible duty, one from which nearly all the revenues of the District are derived, I venture to suggest that there should be appointed seven citizens with respectable compensation as subordinate assessors, selected for their intelligence, integrity, and industry, who should be permanent residents, centrally located in the districts allotted to them. They should give their time to the study of values of property in their districts, take cognizance of all changes by erection or demolition or removal, deliver the schedules for personal taxes and receive returns of the same as notaries, make weekly reports to the treasurer and assessor's office, and annually, during the month of August, they should sit daily as a board of appeals with the treasurer and assessor of the District of Columbia.

The clerks in this office have less pay than in any other portion of the District Government. Their compensation is entirely inadequate for their varied and responsible duties. Their salaries should be such as would justify the bestowal of all their time and talents upon the proper prosecution of their respective duties in the office, without wandering thoughts upon some outside transaction to enable them to eke out a living. I take great pleasure in bearing testimony to the faithful performance of duty by the assistant assessor, chief clerk, and other clerks.

The valuable tables contained in this report have been made up by the chief clerk, Mr. Ros A. Fish, and I commend him to your notice particularly as worthy of as high a salary as any clerk in the District Government.

The book of maps of the squares in Georgetown which was commenced under the auspices of my predecessors in office was completed in July, and we have now for the first time a complete record of the size of every lot in the town.

I respectfully urge upon you the importance of having just such a set of maps or plats of all the property in the county; so that the most ignorant of our citizens may see for himself that every piece of property bears its just share of taxation. I trust that some provision for this purpose may be speedily made. Its cost would be less than \$1,000—its value would be incalculable.

I beg to call your attention to the dilapidated condition of the old tax and numerical books. If they are not taken care of very soon they will be unfit for use, and their restoration will be almost impossible.

I submit herewith an estimate of expenses of this office for the fiscal year ending 30th June 1881.

Very respectfully,

ROB. P. DODGE,  
*Treasurer and Assessor.*

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

#### APPENDIX E.

TREASURER AND ASSESSOR'S OFFICE,  
*Washington, D. C., June 30, 1879.*

*Statement of assessed value of real estate, June 30, 1879.*

	Ground.	Improvements.	Total.
<b>WASHINGTON.</b>			
Taxable.....	\$38, 879, 349	\$36, 705, 100	\$75, 584, 449
District of Columbia.....	248, 700	757, 000	1, 005, 700
Exempt from taxation.....	1, 016, 426	2, 908, 650	4, 015, 076
United States.....	33, 981, 451	44, 960, 116	78, 941, 567
Total.....	74, 125, 926	85, 420, 866	159, 546, 792
<b>GEORGETOWN.</b>			
Taxable.....	2, 021, 531	3, 376, 975	5, 398, 506
District of Columbia.....	15, 345	84, 000	99, 345
Exempt from taxation.....	54, 052	295, 109	349, 152
United States.....	12, 660	59, 767	72, 427
Total.....	2, 103, 588	3, 815, 842	5, 919, 430
<b>WASHINGTON COUNTY.</b>			
Taxable.....	4, 859, 884	1, 802, 450	6, 662, 334
District of Columbia.....	4, 599	29, 900	34, 499
Exempt from taxation.....	242, 709	568, 550	811, 259
United States.....	384, 708	2, 757, 872	3, 142, 580
Total.....	5, 491, 900	5, 158, 772	10, 650, 672

#### RECAPITULATION.

Taxable:	
Washington.....	\$75, 584, 449
Georgetown.....	5, 398, 506
County.....	6, 662, 334
	<hr/> \$87, 645, 289

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## District of Columbia:

Washington .....	1, 005, 700	
Georgetown .....	99, 345	
County .....	34, 499	
		1, 139, 544

## Exempt from taxation:

Washington .....	4, 015, 076	
Georgetown .....	349, 152	
County .....	811, 259	
		5, 175, 487

## United States property:

Washington .....	78, 941, 567	
Georgetown .....	72, 427	
County .....	3, 142, 580	
		82, 156, 574

Total in District of Columbia..... 176, 116, 894

ROBT. P. DODGE, *Treasurer and Assessor.*

## APPENDIX E 1.

TREASURER AND ASSESSOR'S OFFICE,  
Washington, July 1, 1879.

*Value of property in the District of Columbia as assessed for taxation, from 1871 to 1880, inclusive.*

	Washington.	Georgetown.	County.	Total.
1871.....	\$66, 818, 886	\$6, 213, 467	\$6, 965, 101	\$79, 997, 454
1872.....	62, 421, 331	6, 036, 434	6, 500, 000	74, 957, 765
1873.....	72, 880, 380	6, 366, 488	8, 623, 056	87, 869, 924
1874.....	80, 539, 782	6, 272, 010	9, 621, 280	96, 433, 072
1875.....	82, 292, 906	6, 312, 099	9, 270, 036	97, 875, 041
1876.....	78, 818, 934	5, 849, 317	8, 784, 433	93, 452, 684
1877.....	81, 246, 847	5, 953, 932	8, 728, 622	95, 929, 401
1878.....	83, 101, 484	6, 028, 041	8, 480, 365	97, 609, 890
1879.....	75, 555, 801	5, 242, 224	6, 693, 417	87, 491, 442
1880.....	76, 085, 940	5, 291, 313	6, 603, 103	87, 980, 356

ROBERT P. DODGE,  
*Treasurer and Assessor.*

TREASURER AND ASSESSOR'S OFFICE,  
Washington, July 1, 1879.

*Rate of taxation in the District of Columbia from 1871 to 1880, inclusive.*

	Washington.	Georgetown.	County.	
			Suburban.	Agricultural.
1871-'72.....	\$1 70	\$0 95	\$0 85	.....
1873.....	1 70	1 70	1 00	.....
1874.....	2 00	2 00	1 58	.....
1875.....	3 00	2 50	2 00	.....
1876.....	1 50	1 50	1 50	.....
1877.....	1 50	1 50	1 50	.....
1878.....	1 50	1 50	1 50	\$1 25
1879.....	1 50	1 50	1 50	1 00
1880.....	1 50	1 50	1 50	1 00

ROBERT P. DODGE,  
*Treasurer and Assessor.*

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## APPENDIX E 2.

TREASURER AND ASSESSOR'S OFFICE,  
Washington, July 10, 1879.

*Statement of arrear of general taxes, District of Columbia, June 30, 1879.*

	Washington City.	Georgetown.	Washington County.	Totals.
1845 to 1864 .....	\$6,384 98			\$6,384 98
1865 .....	1,869 23			1,869 23
1866 .....	2,608 15			2,608 15
1867 .....	4,038 02			4,038 02
1868 .....	7,310 67		\$3 62	7,314 29
1869 .....	9,650 40		101 47	9,751 87
1870 .....	13,168 16		538 00	13,706 16
1871-'72 .....	6,559 85	\$59 40	285 77	6,905 02
1872-'73 .....	34,630 08	25 35	173 89	34,829 32
1873-'74 .....	77,574 79	4,403 16	22,227 99	104,205 94
1874-'75 .....	152,396 18	12,631 40	32,234 93	197,262 51
1875-'76 .....	82,397 18	7,536 82	16,889 12	106,823 12
1876-'77 .....	142,543 59	9,266 97	30,152 67	181,963 23
1877-'78 .....	179,445 48	15,383 57	37,064 25	231,893 30
1878-'79 .....	325,458 54	24,398 54	33,810 44	383,667 52
Total .....	1,046,035 30	73,705 21	173,482 15	1,293,222 66

ROBT. P. DODGE,  
*Treasurer and Assessor.*

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

## APPENDIX E 3.

TREASURER AND ASSESSOR'S OFFICE,  
Washington, July 10, 1879.

*Statement of arrears of general taxes, Washington City, on 30th of June, 1879.*

1845 to 1864 .....	\$6,384 98	1872-'73 .....	\$34,630 08
1865 .....	1,869 23	1873-'74 .....	77,574 79
1866 .....	2,608 15	1874-'75 .....	152,396 18
1867 .....	4,048 02	1875-'76 .....	82,397 18
1867 .....	7,310 67	1876-'77 .....	142,543 59
1869 .....	9,650 40	1877-'78 .....	179,445 48
1870 .....	13,168 16	1878-'79 .....	325,458 54
1871-'72 .....	6,559 85		
			1,046,035 30

ROBT. P. DODGE,  
*Treasurer and Assessor.*

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

## APPENDIX E 4.

TREASURER AND ASSESSOR'S OFFICE,  
Washington, July 10, 1879.

*Statement of arrears of general taxes, Washington County, 30th June, 1879.*

1868 .....	\$3 62	1874-'75 .....	32,234 93
1869 .....	101 47	1875-'76 .....	16,889 12
1870 .....	538 00	1876-'77 .....	30,152 67
1871-'72 .....	285 77	1877-'78 .....	37,064 25
1872-'73 .....	173 89	1878-'79 .....	33,810 44
1873-'74 .....	22,227 99		
			173,482 15

ROBT. P. DODGE,  
*Treasurer and Assessor.*

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## APPENDIX E 5.

TREASURER AND ASSESSOR'S OFFICE,  
Washington, July 10, 1879

*Statement of arrears of general taxes, Georgetown, 30th June, 1879.*

1871-'72 .....	\$59 40	1876-'77 .....	\$9,266 97
1872-'73 .....	25 35	1877-'78 .....	15,383 57
1873-'74 .....	4,403 16	1878-'79 .....	24,398 54
1874-'75 .....	12,631 40		
1875-'76 .....	7,536 82		73,705 21

ROBT. P. DODGE,  
Treasurer and Assessor.

## APPENDIX E 6.

TREASURER AND ASSESSOR'S OFFICE,  
June 30, 1879

*Statement of arrears of personal taxes in the District of Columbia on 30th June, 1879.*

Washington City tax of 1877 .....	\$49,971 18	
Washington City tax of 1878 .....	93,158 16	
Washington City tax of 1879 .....	63,050 49	\$206,179 83
Georgetown tax of 1877 .....	7,595 14	
Georgetown tax of 1878 .....	8,645 92	
Georgetown tax of 1879 .....	8,427 75	24,668 81
Washington County tax of 1877 .....	2,119 17	
Washington County tax of 1878 .....	1,944 41	
Washington County tax of 1879 .....	3,380 36	7,443 94
Total .....		238,292 58

ROBT. P. DODGE,  
Treasurer and Assessor.

## APPENDIX E 7

## Statement of personal assessment to June 30, 1879.

Year, to June 30.	Location.	Number.		Returns.		Assessment.		Tax.		Tax collected.		
		Voluntary.	Arbitrary.	Voluntary.	Arbitrary.	Total.	Total.	Total.	Total.	To June 30, 1877.	To June 30, 1878.	To June 30, 1879.
1876-77	Washington	3928	350	\$11,954,614	\$1,188,960	\$13,143,574	\$197,153 61	\$128,039 77	\$17,653 39	.....	\$1,489 27	\$147,182 43
1877-78	do	2583	1006	11,007,351	4,238,843	15,206,224	228,993 36	.....	103,175 08	.....	32,000 12	155,835 20
1878-79	do	3184	1378	9,982,407	1,562,569	11,544,976	173,174 64	.....	.....	.....	110,124 13	110,124 13
1876-77	Georgetown	261	52	1,271,212	488,198	1,759,410	26,391 15	.....	1,984 88	.....	279 42	18,796 01
1877-78	do	306	251	1,126,137	427,369	1,553,506	23,302 39	.....	11,867 51	.....	2,789 16	14,466 67
1878-79	do	398	147	1,052,396	284,942	1,335,338	20,050 67	.....	.....	.....	11,062 32	11,062 32
1876-77	County	225	54	377,323	139,556	516,889	7,753 24	.....	1,123 50	.....	14 28	5,634 17
1877-78	do	182	126	316,362	106,959	419,321	6,290 82	.....	3,508 10	.....	827 31	4,245 41
1878-79	do	174	153	286,844	169,763	456,606	6,849 09	.....	.....	.....	3,468 73	3,468 73
1876-77	Totals	3524	456	13,603,159	1,816,714	15,419,873	231,298 10	149,077 77	20,651 77	.....	1,883 07	171,612 61
1877-78	do	3074	1983	12,445,880	4,793,171	17,239,051	258,585 77	.....	118,550 69	.....	36,286 59	154,837 28
1878-79	do	3756	1678	11,321,647	2,015,273	13,336,920	200,033 80	.....	.....	.....	125,195 20	125,195 20
Grand total	.....	.....	.....	.....	.....	.....	689,937 67	.....	.....	.....	.....	451,645 09

ROBT. P. DODGE,  
Treasurer and Assessor.

TREASURER AND ASSESSOR'S OFFICE, June 30, 1879

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## APPENDIX E 8.

TREASURER AND ASSESSOR'S OFFICE,  
Washington, D. C., October 31, 1879.

*Statement of personal assessment for the fiscal year ending June 30, 1880.*

Washington City:		
1,728 voluntary returns .....	\$7,002, 257	
1,963 arbitrary returns .....	2,927, 650	
		\$9, 929, 907
Georgetown:		
242 voluntary returns .....	678, 491	
231 arbitrary returns .....	480, 427	
		1, 158, 918
County:		
51 voluntary returns .....	83, 313	
155 arbitrary returns .....	249, 293	
		332, 606
		11, 421, 431
Tax at \$1.50 per \$100 .....		171, 321 47
ROBT. P. DODGE,		
Treasurer and Assessor.		

## APPENDIX E 9.

TREASURER AND ASSESSOR'S OFFICE,  
October 31, 1879.

*Statement of assessed value of taxable real estate in the District of Columbia for the fiscal year ending June 30, 1880.*

Washington City:		
Ground .....	\$38, 867, 440	
Improvements .....	37, 218, 500	
		\$76, 085, 940
Georgetown:		
Ground .....	2, 213, 288	
Improvements .....	3, 078, 025	
		5, 291, 313
Washington County—		
Suburban:		
Ground .....	\$1, 428, 095	
Improvements .....	820, 300	
		2, 248, 485
Agricultural:		
Ground .....	3, 431, 473	
Improvements .....	923, 145	
		4, 354, 618
		6, 603, 103
Total .....		87, 980, 356
RECAPITULATION.		
Ground, \$42,508,823, at \$1.50 .....		\$637, 632 35
Ground, \$3,431,473, at \$1 .....		34, 314 73
Improvements, \$41,116,915, at \$1.50 .....		616, 753 72
Improvements, \$923,145, at \$1 .....		9, 231 45
Total tax .....		1, 207, 932 25

## APPENDIX E 10.

TREASURER AND ASSESSOR'S OFFICE,  
October 10, 1879.

GENTLEMEN: On the 1st of January last, the offices of treasurer, superintendent of taxes, and assessors were consolidated into one office,

under the name of treasurer and assessor's office, and I was placed in charge.

In addition to the regular duties of these offices the making out of all tax-bills and posting of the payments of all general taxes was added, while the force was greatly reduced. The total provision for these offices, as estimated previous to consolidation, was \$20,350.

I have the honor to submit the following estimate for the year 1880-'81, believing that by a proper increase of salaries all extra allowances will cease to be demanded or expected:

Treasurer and assessor.....	\$3,000
Assistant assessor .....	2,400
Chief clerk.....	1,800
Two tax-clerks, Washington books.....	3,200
Two assistant clerks, Washington books.....	2,400
One clerk, personal tax .....	1,200
One tax-clerk, Georgetown and county.....	1,400
Two assistant clerks, Georgetown and county.....	2,400
One license-clerk.....	1,200
One assistant and messenger.....	900
One messenger.....	720
Contingencies.....	2,200
Total.....	22,820

Very respectfully,

ROBT. P. DODGE,  
*Treasurer and Assessor.*

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

## F.—REPORT OF THE INSPECTOR OF BUILDINGS.

OFFICE OF THE INSPECTOR OF BUILDINGS,  
*Washington, September, 1879.*

GENTLEMEN: I have the honor herewith to submit my annual report for the year ending June 30, 1879, covering the transactions of this office since my last report, commencing on July 1, 1878, together with recommendations and estimates for the coming year.

*Tabular statement of permits issued for buildings, &c., from July 1, 1878, to June 30, 1879, inclusive.*

No.	Description.	Value.
470	New brick buildings and stairs.....	\$1,306,625
464	Brick repairs including back buildings.....	176,257
39	Brick stables and carriage-houses (private).....	32,490
5	Brick livery-stables.....	5,650
4	Brick school-houses (private).....	63,500
1	Brick church.....	5,000
18	Brick workshops.....	11,590
2	Greenhouses.....	1,200
9	Brick office-buildings.....	22,215
1	Skating-rink.....	6,000
1	Ice-house.....	2,400
1	Public hall.....	3,700
24	Frame dwellings (in county).....	11,280
644	Frame repairs, including back buildings.....	80,668
29	Removals of frame houses.....	1,505
139	Frame sheds.....	4,205
3	Frame stables (in county).....	730
1	Sign.....	200
2	Furnaces.....	350
1	Engine.....	350
53	Awnings.....	
50	Vaults (being 410½ linear feet).....	
1,981	Permits, at a total value of.....	1,735,715



The total revenues for the twelve months amounts to \$3,620.

By reference to the above statement it will be seen that the total number of new buildings erected in the cities of Washington and Georgetown during the year, exclusive of private stables, is 511, and in the county from January the 1st to June 30, 1879, is 24.

By comparing the number and value of new buildings, I find that the number during the two preceding years was more than one-third greater than this year, but the value this year is equal to either of the two preceding years, which shows that a better class of buildings have been built this year.

The regulations giving authority to the inspector to control the quality of material and manner of construction has enabled him to enforce a better class of work, especially on the smaller buildings.

There have been served one hundred and twenty-two notices for violation of the regulations; and as most of them were caused by ignorance of the requirements, an extension of thirty days was given in each case to comply with the order. Nearly all of them conformed within the time to the order, and only the most obstinate were prosecuted. The course as pursued has had the effect to familiarize the public with the law and diminish the number of violations. There have been entered one hundred and sixty-nine complaints of defective and dangerous buildings, all of which have been examined and defects remedied. Thirty-four condemnations of buildings as dangerous to life and limb have been made, all of which have been complied with except those which were taken down by the District and the expense made a lien upon the property.

#### DISTRICT BUILDINGS.

##### *Engine-houses.*

Since my last report the two new buildings for the hook-and-ladder companies have been erected, and the old hook-and-ladder house on Massachusetts avenue, between Fourth and Fifth streets, has been reconstructed for an engine-house. These buildings will, in my opinion, compare favorably with any for similar purposes in the country, as to convenience, prompt working, and the comfort of the men.

I would again call your attention to the necessity for a new engine-house in place of No. 5 in Georgetown. The present house, as I before stated, is entirely unfit for the purpose, as well as being in a dilapidated and unsafe condition. I would therefore recommend either to build a new house on the present site, which will cost about \$6,500, or to reconstruct the old town-hall for the purpose, at a cost of about \$4,000, and dispose of the old site.

The other engine-houses are in a fair state of repair, and to keep them in good condition during the year will require an appropriation of \$1,500. There is, in my opinion, a great necessity for a new additional engine-house in the northern section of the city, the cost of which, including the purchase of lot for same, would be about \$10,000.

##### *Police stations.*

The station-houses are all in a fair state of repair, and to keep them in good condition for the next year will require an appropriation of \$1,200.

I would again call your attention to the necessity of providing a more suitable house for the fifth or central station, now located on Tenth,

between D and E streets. The large number of prisoners taken to this house requires that it should be better adapted for the purpose. There can be no better situation for it than the old central guard-house. The causes for which it was abandoned could be easily remedied and the house fitted up for a first-class station-house, at a cost of about \$2,000. The present house on Tenth street is leased at \$1,200 per annum, the lease expiring October 1, 1880; and as the old central guard-house is the property of the District, the proposed change would be a great saving, as the central guard-house now brings but a very little revenue.

I would also recommend to build a station-house and free dispensary upon the land owned by the District at Ninth and K streets, to be occupied by the sixth precinct, now in the rented (church) building on Massachusetts avenue between Ninth and Tenth streets, lease of which expires July 1, 1880. To put up this building as per plans submitted to you for the purpose above named would cost about \$10,500.

There is required a sub-station at Tennallytown, which should be constructed so as to afford a dwelling for the officer and a cell-building, all at a cost of about \$1,500.

#### *Market-houses.*

The Eastern, Western, and Georgetown markets are all in a fair state of repair, and to keep them in good order during the year will require an appropriation of \$1,000.

The sheds used for a market on O street and Seventh are becoming so dilapidated that there must be some provision made for a new market-house during the year, or the sheds must be abandoned as a market. The ground owned by the District is sufficiently large to be divided, one-half fronting on O and Seventh streets for market-house, and the other half fronting on P and Seventh streets for public school purposes, of which seven lots at the corner of P and Seventh could be sold off at \$25,000, and yet leave a lot fronting on P street, for public school, 200 by 135 feet. A suitable market-building can be erected at a cost of about \$50,000, and this outlay would be repaid by the sale of stalls and the rent within five years from completion. It has proved to be the best situation in that section of the city for a market, it being convenient to three street-railways, and surrounded by a large and growing population.

#### *Public-school buildings.*

The repairs and construction of public-school buildings having only recently been placed under the supervision of this office, I am not prepared to enter into details of their condition and necessities, but from examinations made, so far, I find it will require an appropriation of \$20,000 to keep them in repair during the next fiscal year.

In view of the fact that a large portion of the schools are located in rented buildings, and most of them being unfit for the purpose, I would recommend that an appropriation of \$75,000 be made each year for the purchase of sites and construction of buildings in healthy and convenient localities, as well in the county as in the city.

The county schools, though nearly all owned by the District, are in small and unsuitable frame buildings, and should as fast as possible be replaced by larger and better constructed buildings.

The estimated expenses of this office for the year are—

Salary of Inspector of Buildings.....	\$2,400
Salary of first assistant and draughtsman.....	1,700
Salary of second assistant on school buildings.....	1,200
Salary of third assistant.....	1,000
Salary of messenger.....	480
Stationery.....	300
Total.....	7,080

#### RECAPITULATION OF ESTIMATES OF REPAIRS, &C.

Engine-houses:	
New No. 5 engine-house.....	\$6,500
One new engine-house in northern section.....	10,000
Repairs to engine-houses.....	1,500
Total.....	18,000

Police stations:	
Sixth precinct and free dispensary.....	\$10,500
Sub-station at Tennallytown.....	1,500
Central guard-house.....	2,000
Repairs to police stations.....	1,200
Total.....	15,200

Market-houses:	
New market-house on Seventh and O.....	\$50,000
Repairs to markets.....	1,000
Total.....	51,000

School-houses:	
New school-houses and sites.....	\$75,000
Repairs to school-houses.....	20,000
Total.....	95,000

Sundry District buildings:	
Repairs to sundry buildings.....	\$2,000
Respectfully submitted.	

THOS. B. ENTWISLE,  
*Inspector of Buildings.*

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

#### G.—REPORT OF THE FIRE COMMISSIONERS.

OFFICE BOARD OF FIRE COMMISSIONERS,  
*Washington, October 21, 1879.*

GENTLEMEN: In accordance with your request of September 9, 1879, we have the honor to submit herewith a report of the transactions of the fire department from July 1, 1878, to June 30, 1879, with recommendations and estimates for its support for the fiscal year ending June 30, 1881.

#### EXPENDITURES.

As will be seen by the statement of the auditor, inclosed in the report of the chief engineer, the total expenditures for the period named

amounted to \$132,170.45. This included the expenditures for the purchase of lots, and for the erection of and furnishing two new houses, purchase of two new engines and two hose carriages, one new truck, and the hose, horses, &c., necessary to equip the same, the rebuilding of the old truck-house, and extensive repairs on the house of No. 2 Engine Company.

#### ESTIMATES.

As will be seen by the report of the chief engineer and the superintendent of the fire-alarm telegraph, the estimates for the ensuing year amount to \$146,070.

In his report the chief engineer submits suggestions and estimates for certain permanent improvements, all of which are necessary, and the appropriations should be made.

#### BUILDINGS.

The buildings and rooms occupied by the department are as follows: Office for board of commissioners and chief engineer, room 26 Columbia Building; central office fire-alarm telegraph, corner Pennsylvania avenue and Four-and-a-half street; six fire-engine-houses and two truck-houses.

The recommendations of the chief engineer for the erection of a new house for company No. 5, and of a new house in the northern section of the city, are approved.

#### APPARATUS.

The apparatus now in use is all in good condition, but the Amoskeag Engines, which have been in service a long time, require constant attention and repairs and cannot be expected to last much longer. Before they get entirely worn out, it would be an economical measure to exchange them for new ones.

The suggestion of the chief engineer, that the old truck be rebuilt at an expense of \$1,000 is proper and timely, as in the event of either of the other trucks getting out of order the service would under present circumstances be crippled.

#### HORSES.

There are now 34 horses in the department, 6 of which are worn out and should be replaced with serviceable ones. The horses purchased during the year were of the best character, and under ordinary circumstances will last several years.

#### FIRE-ALARM TELEGRAPH.

This branch of the service continues to work in the most satisfactory manner, but it is necessary that some additional boxes should be erected in several sections of the District, as set forth in the report of the superintendent. We also approve his recommendations for appointment of a repairman and another telegraph operator, and that the clerical error in the appropriation bill, by which the pay of the operators was reduced from \$1,200 to \$1,000 per year, should be rectified and the pay restored to \$1,200.

#### FIRE-PLUGS.

Attention is again called to the necessity for changing the 9-inch outlets of the old fire-plugs to the standard size of 10 inches. The water

supply is not what it should be in the business sections of the city, and every possible means should be taken to utilize all of what there is. In the remote sections, additional plugs should be erected at every opportunity.

#### DISABLED FIREMEN.

We again call attention to the fact that no provision is made by law for the members of the department who are unfit for active service by reason of disability incurred in the line of duty. We are compelled to carry these men on the rolls as active members, or else discharge them from the force, broken in health and unable to make a living for themselves or families. We would recommend that provision be made for such men in other branches of the public service suited to their physical condition. Where men are so far broken in health or maimed by accident as to be totally unfit for any duty whatever, they should be retired upon pay sufficient to keep them comfortable during the continuance of their disability. There are several men now in the department who will never be able to perform active duty as firemen, and some provision should be made for them at once.

We heartily thank you, gentlemen, for your support and encouragement of us in our efforts to promote the efficiency of the fire department and the welfare and comfort of its members.

The good discipline of the force and its success in preventing the spread of fires is largely due to the faithful and intelligent supervision of Chief Engineer Cronin, and the zealous aid of Assistant Chief Engineer Drew. The company officers and men of the department are warmly commended for their cheerful compliance with the rules, prompt obedience of orders, faithful service at fires, and general good conduct.

Superintendent of Fire-Alarm Telegraph Miles has performed his duties in a very intelligent and satisfactory manner.

All of which is respectfully submitted.

W. R. COLLINS,  
THOMAS L. HUME,  
PETER F. BACON,

*Board of Fire Commissioners.*

THE COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

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#### APPENDIX G 1.

#### REPORT OF CHIEF ENGINEER.

WASHINGTON, D. C., October —, 1879.

GENTLEMEN: In compliance with the request of the Commissioners of the District of Columbia, September 9, 1879, I submit herewith a report of the working of the fire department from July 1, 1878, to June 30, 1879; a detailed statement of the number of fires, roster of members, an inventory of the property of each company, estimates for the expenses of said department for the fiscal year ending June 30, 1881, and certain suggestions and recommendations that, in my judgment, are necessary to further increase its efficiency. An accompanying table, marked "A," shows that during the year ending June 30 last there were 133 alarms, of which 114 were for actual fires, 2 false alarms, and 17 chimneys' fires. The actual fires involved an alleged loss of \$81,400, with an insurance of \$62,275. This is about the same as during the preceding year, when there were 131 alarms, with a loss of \$70,350 and an insurance of \$55,100.

## APPARATUS.

The apparatus on hand consists of 8 engines, 8 hose-carriages (all in good order), 3 hook-and-ladder trucks (one so completely out of repair as to render it absolutely worthless, and which should be rebuilt), and 1 old two-wheel fuel cart. I have heretofore called attention to the great necessity for two new fuel-wagons, and I renew my recommendation that they be procured.

While all the engines are rated as good, it should be mentioned that the Amoskeags Nos. 1, 2, 3, and 5 have been in service ever since the organization of the paid fire department, and, while in fair repair, I recommend as a matter of genuine economy that they be exchanged for new and improved apparatus, as was done with the No. 4 Silsby engine.

I further recommend that all the engines be fitted with the improved relief valve, the same as on No. 6 engine, which is, in my judgment, a very important and valuable aid. Those at present in use can be exchanged for the new style at a cost which is very small when compared with the improvement they will make in the apparatus and the important service they perform.

## HOUSES.

Since the last report, two new houses have been constructed and are occupied by trucks A and B. The old truck-house has been thoroughly remodeled and converted into an engine-house, and the house of engine company No. 2 has been greatly improved.

These improvements permit the gratifying report that all the houses are in good condition except that occupied by No. 5 company in Georgetown. As has been so often stated, that house is old and is too small and ill adapted to the purposes of a modern fire-engine house.

I respectfully urge that, as soon as possible, steps be taken to have a new and proper house for this company, erected on an eligible site. As is known, the department have now two reserve engines, and, in order to bring it to a proper standard, I ask that a new house be erected and a new company equipped for the northern section of the city; if this be done, no additional force will be necessary for years to come.

## HOSE.

There is now in the department 13,550 feet of fabric hose in good condition, 4,000 feet in bad condition, and 1,050 feet of old unserviceable leather hose. The average duration of hose is between three and four years, and in order that the supply may be equal to the demand a certain quantity should be purchased annually and kept on hand in order to immediately supply any deficiencies caused by wear or accident.

## HORSES.

During the period embraced in this report 16 horses have been purchased to supply the new companies and replace old ones. During the same period 6 worn-out horses were turned over to the property clerk, and 4 died. There are now in the department 34, of which 26 are in good condition, and the others should be replaced by serviceable ones.

## WATER SUPPLY.

In this connection, I beg leave to call your attention to the comparatively unknown fact that in the business portions of the city the present

supply of water or water fixtures are inadequate to properly work the full force of the department in the event of a large fire. This is a most important subject, and the proper and permanent remedy would be either in larger water-mains or in reopening the old and constructing new cisterns in several sections of the city. This can be done at a comparatively small cost, and the advantages to be derived will be great.

It is useless to ask the erection of additional fire-plugs along the line of 6 or 4 inch mains, for those now up cannot supply sufficient water for our engines working at a high pressure, and for this reason I urge either cisterns or large mains, or both.

In addition to this, the old plugs with 9-inch outlet should be at once altered to 10-inch, as this will secure uniformity and in many cases insure a larger flow of water.

A special point in the city to which I beg leave to call your attention is the Government Printing-Office, a building which, in addition to the host of persons who are employed there day and night, contains so much valuable property. This building is old, ill constructed, and, although crowded with inflammable material, was constructed without any regard to safety from fire. In its vicinity there are but few plugs, and those on small mains. I beg that the number be increased, and that, at least, two cisterns be dug in that locality, for in addition to this office there are several hundred buildings in that immediate section, built in rows, many of them without even brick partition walls, and all liable to rapid destruction in the event of a fire without a full supply of water.

#### FIRE-ESCAPES.

For the fourth time I call attention to the necessity of fire-escapes in all large buildings where numbers of persons congregate. In addition to fire-escapes I would recommend that in all the government buildings and hotels in the city iron ladders reaching from the ground to the roof be constructed and kept in position at all times, thus providing a mode of reaching the roof in time of fire. Such ladders could be placed against inside or court-yard walls of the public buildings, and in the others suitable places could be found, so as to prevent their interfering with the appearance of the edifice. I notice, with regret, that many of the merchants have been permitted to erect upon the tops of their buildings large sign-boards, most of them of wood. This is a most dangerous practice, as in the event of a large fire they are liable to be lifted by the heat and in this burning condition carried squares distant, to the imminent danger of other property.

The following statement of the auditor shows the expenses of the department for the year:

#### EXPENDITURES FROM JULY 1, 1878, TO JUNE 30, 1879.

Compensation of department from July 1 to December 31, 1878.	\$28,771 28	
Compensation of department from January 1 to June 30, 1879..	37,843 48	
		\$66,614 76
Repairs to apparatus.....		2,904 20
Repairs to engine-houses.....		184 00
Forage for department.....		2,960 06
Purchase of hose.....		3,300 00
Fuel.....		744 17
Horses.....		470 00
Insurance.....		148 72
Miscellaneous expenses.....		9,736 63
Total.....		<u>87,062 54</u>

# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 87

## NEW COMPANIES.

Purchase of lots.....		\$4,062 36
Erection of truck-house A.....	\$6,448 38	
Erection of truck-house B.....	6,730 71	
		13,179 09
Remodeling engine-house No. 2.....	1,534 10	
Remodeling engine-house No. 6.....	3,769 42	
		5,303 52
Hook-and-ladder truck.....	1,749 00	
Two new engines.....	6,600 00	
Two new hose-carriages.....	1,400 00	
		9,749 00
Equipment of same, as follows:		
Horses.....	2,760 00	
Hose.....	4,193 20	
Harness.....	202 92	
		7,156 12
Furnishing houses, carpets, bedsteads, &c.....		2,414 67
Miscellaneous expenses.....		3,243 15
Total.....		45,107 91

## ESTIMATES.

The estimates for the ensuing year aggregate \$142,280, which may seem a large sum, but I have been careful not to include anything or any amount which I do not deem essential to the proper conduct of the department, and I urge that all I ask be allowed.

### Fire department estimates.

2 commissioners, at \$16.66 per month.....	\$400
1 commissioner and secretary, at \$33.33 per month.....	400
1 chief engineer, at \$150 per month.....	1,800
1 assistant engineer, at \$133.33 per month.....	1,400
8 foremen, at \$83.33 per month.....	8,000
6 engineers, at \$83.33 per month.....	6,000
8 hostlers, at \$66.66 per month.....	6,400
6 firemen, at \$66.66 per month.....	4,800
2 tillermen, at \$66.66 per month.....	1,600
54 privates, at \$60 per month.....	38,880
3 watchmen, at \$60 per month.....	2,160
1 superintendent fire-alarm, at \$125 per month.....	1,500
2 operators, at \$100 per month.....	2,400
Total.....	75,740
Repairs to apparatus.....	\$3,500
Repairs to houses, incidental.....	1,000
Forage.....	4,320
Purchase of hose.....	4,000
Fuel.....	1,000
Purchase of horses.....	2,000
General and miscellaneous expenses, including supplies of all kinds.....	12,000
	27,820
	75,740
Total for salaries, general and miscellaneous expenses, and supplies of all kinds.....	103,560



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Estimates as per recommendation:

New house in Georgetown.....	\$6,500
New lot and house, northern section, and furnishing.....	10,000
Two fuel-wagons.....	500
Rebuilding old truck.....	1,000
Exchanging three Amoskeag engines for new.....	8,000
Five improved relief valves and nozzles.....	800

Total.....26,800

For additional company in northern section:

Salaries.....	\$7,920
Contingent.....	4,000

Total.....11,920

## CONCLUSION.

In concluding this report, it gives me pleasure to state that during the year the members of the force have, with rare exceptions, performed their respective duties with fidelity and ability, and that in discipline and effectiveness the department will compare with any in the country. I also return thanks to you, gentlemen of the board, for the ready and prompt manner in which you have supported me in making the department what it is; and to the Commissioners of the District and the assistant chief engineer for their co-operation; also to the major and superintendent of police, and the members of the force, who have ever rendered willing assistance on the fire-ground, for which the thanks due are hereby tendered.

MARTIN CRONIN,  
Chief Engineer.

The BOARD OF FIRE COMMISSIONERS.

A.—Monthly summary of fire loss, insurance, and alarms from July 1, 1878, to June 30, 1879.

Date.	Loss.	Insurance.	Alarm.	Actual.	False.	Chimney.	Test.
1878.							
July.....	\$5,525	\$2,175	12	10	2		
August.....	1,400	1,200	7	6		1	
September.....	6,100	5,200	8	7		1	
October.....	1,700	800	7	7			
November.....	1,100	900	10	10			
December.....	1,525	300	15	5		10	
1879.							
January.....	3,300	3,600	12	11		1	
February.....	13,000	11,900	14	14			
March.....	3,500	3,200	10	10			
April.....	3,500	3,000	16	14		2	
May.....	35,500	26,300	12	11		1	
June.....	2,050	2,300	10	9		1	
Total.....	\$2,400	\$2,275	113	114	2	17	

MARTIN CRONIN,  
Chief Engineer Fire Department, District of Columbia.

## APPENDIX G 2.

WASHINGTON, D. C., *October 1, 1879.*

SIR: I have the honor to present my inventory of stock on hand up to July, 1879.

Respectfully, yours,

JOSEPH PARRIS,  
*Foreman of Engine Company No. 1.*

MARTIN CRONIN, Esq.,  
*Chief Engineer District Columbia Fire Department.*

*Members of No. 1 Engine Company.*

Name.	Age.	Occupation.	Residence.
Joseph Parris, foreman .....	43	Plasterer .....	1908 N street n. w.
James Moriarty, engineer .....	39	Machinist .....	2013 K street n. w.
W. B. Read, fireman .....	36	Gasfitter .....	Twenty-third street, bet. G and H.
James T. Norris, hostler .....	35	Laborer .....	1914 Sixteenth street n. w.
James T. Burroughs, assistant .....	28	Tinner .....	1024 K street n. w.
William French, private .....	36	Laborer .....	1018 Twentieth street, n. w.
James F. Edwards, private .....	45	Carpenter .....	1606 Sixteenth street n. w.
J. O. Guy, private .....	30	do .....	744 Seventh street s e.
Hered Osborn, private .....	28	Farmer .....	1008 K street n. w.
James D. Adams, private .....	26	Clerk .....	2312 G street n. w.

*Inventory of Engine Company No. 1, from July 1, 1878, to June 30, 1879.*

## SITTING-ROOM AND BED-ROOM.

1 extension table and cover.	2 good towels.
1 clock.	2 door-mats.
1 stove.	1 feather duster.
1 old sofa.	2 stair carpets and rods in bad order.
1 small center-table.	1 old looking-glass in bath-room.
8 arm-chairs.	1 wash-stand.
10 old plain chairs.	1 bath-tub.
2 carpets.	1 comb and brush.
6 old window-shades.	1 bucket.
1 looking-glass.	1 cotton mop.
2 department pictures.	1 coal-hod.
1 writing-desk.	1 stove-shovel.
12 spittoons.	1 Pope-head brush.
20 old mattresses.	1 soap-dish.
10 feather pillows.	1 record and roll book.
80 blankets.	5 lamp-globes.
20 new sheets.	1 broom.
10 old sheets.	1 sponge.
25 pillow-cases.	1 dust-pan and hand-brush.
20 bed-spreads.	12 iron bedsteads.
1 alarm-gong.	1 stub-book.

## ENGINE-ROOM.

1 Clapp & Jones engine, complete.	1 chamois-skin.
1 old vice.	2 oil-cans.
2 monkey-wrenches.	3 tons engine-coal.
1 screw-wrench.	1 screw-jack.
5 old files.	1 clock.
6 assorted wrenches.	$\frac{1}{2}$ cord sawed and split wood.
1 cold-chisel.	1 Walton & Brother coal-heater.
1 sponge.	10 feet $\frac{3}{4}$ -inch gun steam-hose.

## HOSE-CARRIAGE DEPARTMENT.

26.50 feet of canvas hose in good order.	1 reflecting lamp.
800 feet of bursted hose.	2 brass lamps.
1 hose-carriage complete.	10 old leather pipes.
1 wood-ax.	4 old nozzles.
1 gun bucket.	1 extra hose-carriage pole.
100 feet of life-line.	1 patent hose-oiler.
1 compound hose pipe.	4 extra wheels for hose-carriage.
1 picket rope.	2 old Jones couplings.
1 Nealy respirator.	1 old engine-pole.
2 Johnson pumps.	1 barrel lime.
4 ladder-straps.	3 small pick-axes.

## HOSTLER'S DEPARTMENT.

3 horses in good condition.	2 mane-brushes.
1 horse in bad condition.	1 half-peck measure.
3 sets of harness complete; one in bad condition.	1 oat-sieve.
2 extra collars.	1 extra set of lines.
2 good pitchforks.	1 set of lines in bad condition.
2 scoop shovels.	1 clipping machine in bad condition.
2 currycombs and brushes.	1 pair of clipping-shears and comb.
2 sweat-scrapers.	30 bushels oats.
1 serviceable saddle.	600 pounds hay.
1 saddle in bad condition.	300 pounds straw.
4 leather head halters and chains.	$\frac{1}{2}$ peck flax-seed meal.
4 horse-blankets in good condition.	10 pounds rock salt.
1 extra set pole-straps.	1 wheelbarrow.
1 gum bucket.	2 stable-brooms.
2 new wooden horse-buckets.	2 dirt-shovels.
4 summer covers.	1 cutting-box.

## SITTING-ROOM DOWNSTAIRS.

8 plain arm-chairs.	1 soap-dish.
1 water-cooler and stand.	1 coal-hod and shovel.
1 looking-glass.	1 step-ladder in bad order.
1 comb and brush.	3 window-shades complete.
1 fire-screen.	1 16-foot ladder.
4 spittoons.	1 copper boiler.
2 stoves in good order.	

## STORE-ROOM.

1 lantern.	2 pounds oxalic acid.
1 shovel.	4 15-inch files.
1 water-hoe.	10 pounds sponge.
1 $\frac{1}{2}$ -gallon measure and funnel.	10 pounds cotton waste.
3 old steam-gauges.	$\frac{1}{2}$ gallon copal varnish.
$\frac{1}{2}$ pound sole leather.	1 gallon raw oil.
1 pound copper rivets.	1 gallon boiled oil.
$\frac{1}{2}$ dozen spanners.	$\frac{1}{2}$ gallon tincture arnica.
1 new dust-brush.	$\frac{1}{2}$ gallon shellac varnish.
3 corn brooms.	1 mane brush.
1 feather duster.	1 scrub-brush.
$\frac{1}{2}$ gross matches.	6 balls lamp-wick.
3 bars castile soap.	2 new Jones couplings.
1 dozen papers tripoli.	1 dozen chamois-skins.
$\frac{1}{2}$ box brown soap.	1 dozen hame-straps.
6 lamp-globes.	1 dozen harness-hooks.
$\frac{1}{2}$ dozen papers tacks.	3 papers lampblack.
2 cans harness-oil.	1 hatchet.
$\frac{1}{2}$ dozen sheets emory cloth.	1 hand-saw.
$\frac{1}{2}$ dozen sheets erous cloth.	

*Inventory of stock and fixtures of Engine Company No. 2 up to July, 1879.*

WASHINGTON, D. C., 1879.

SIR: I most respectfully submit the following list of property of No. 2 Engine Company:

One two-story brick house, with hose-tower attached, located on D street, near Twelfth street, northwest. The house during the past year has had a new front put in and a new brick floor in engine-room; also a spiral stairs has been erected, and other alterations, so we have now almost a model engine-house.

## ENGINE DEPARTMENT.

1 Clap & Jones double-pump engine.	1 hammer.
1 Gould coal-heater attached to engine.	2 cold-chisels.
1 Pruentz relief-valve not attached to engine.	1 gallon of axle-oil and can.
1 spring-bottom oiler.	2 flat files.
2 spanners.	2 half-round files.
2 monkey-wrenches.	1 soldering-iron.
1 screw S. wrench.	1 pair of Key's pipe-tongs.
2 socket-wrenches.	1 screw-jack.
1 five-gallon machine-oil can.	1 cord of pine wood.
1 five-gallon coal-oil can.	2 tons of soft coal.
2 gallons of machine-oil.	2 pounds of Selden paper packing.
3 gallons of coal-oil.	15 pounds of cotton waste.
1 one-gallon machine-oil can.	3 pounds of whiting.
12 sheets of emery cloth.	1 pound of oxalic acid.
2 pairs of wire plyers.	6 papers of tripoli.
1 vise and bench.	1 extra engine-pole.
	2 hand-lanterns for steamer.

## HOSE DEPARTMENT.

1 hose-carriage.	2 old brass pipes.
3,400 feet of canvas hose.	1 pair of carriage-shafts.
100 feet want repairing.	2 Johnson's pumps.
2 long-handle axes.	2 smoke-respirators.
3 short-handle axes.	4 hand-lanterns, two of them old.
3 ladder-straps.	1 reflecting-lantern.
2 Jones couplings.	100 feet of picket-line rope.
2 brass reducers.	200 feet of cotton life-line rope.
1 Y connection.	2 gum buckets.
2 leather pipes.	1 extra carriage-pole.
2 gum pipes.	1 carriage-jack.
6 nozzles.	2 extra carriage-wheels.
2 spray-nozzles.	2 pipe-holders.
1 Pruentz patent cut-off nozzle.	

## HOSTLER'S DEPARTMENT.

4 fine large bay horses in splendid condition.	40 bushels of oats.
2 sets of double harness as good as new.	800 pounds of straw.
2 sets of double harness in fair condition.	700 pounds of hay.
4 extra bits.	6 bushels of mixed feed.
3 old collars.	1 peck of flax-seed meal.
1 Dutch collar.	1 peck of salt.
4 extra traces.	4 good horse-blankets and hoods.
5 halter-straps.	4 old horse-blankets and hoods.
2 pad riding-saddles, one of them very old.	1 cutting-box.
1 hand clipping-machine.	1 feed-bin.
2 currycombs.	2 pitchforks.
2 corn mane-brushes.	1 half-peck measure.
2 hair horse-brushes.	2 knee-pads.
2 whips.	8 hitching-straps.
1 old bridle.	1 dozen assorted snaps.
1 harness-punch.	1 set of lead-bars.
4 old collar-pads.	2 water-buckets.
2 sets of pole-straps.	3 surcingles.
4 patent pole-snaps.	2 stable-brooms.
2 old sets of pole-straps.	2 shovels.
2 old sets of breast-straps.	4 collar-pads.
	1 feed-sieve.
	4 horse-troughs.

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## HOUSE DEPARTMENT.

12 yards stair-linen.  
12 iron bedsteads.  
10 hair mattresses.  
10 shuck mattresses.  
10 old shuck mattresses.  
6 old hair pillows.  
11 feather pillows.  
30 bed-spreads.  
30 blankets.  
24 pillow-slips.  
24 sheets.  
2 carpets.

40 yards of linen crash.  
12 yards of stair-carpet.  
10 gum spittoons.  
12 cuspidores, spittoons.  
2 clocks.  
20 arm-chairs.  
3 stoves and pipes.  
2 coal-hods.  
1 center-table and cover.  
1 secretary.  
7 window-shades.  
1 looking-glass.

## MISCELLANEOUS.

30 feet garden-hose.  
3 extra glass water-gauges.  
1 pair shears.  
6 chamois-skins.  
1 pound of sponge.  
6 bars of castile soap.  
20 bars of brown soap.  
3 boxes of Young's detergent.  
3 papers of stove-polish.  
8 corn-brooms.  
1 jack-plane.  
2 pounds of nails.  
1 backgammon-board.  
2 pokers.  
2 stove-brushes.  
1 water-pot.  
2 hair-combs.  
2 wash-stands.  
1 Bible.  
1 alarm and 1 day book.  
1 requisition-book.  
Library, containing 80 bound books and  
179 unbound books.

$\frac{1}{2}$  gross parlor-matches.  
2 scrub-brushes.  
3 paint-brushes.  
6 lamp-wicks.  
1 tin water-boiler.  
1 coffee-boiler.  
4 tin cups.  
2 hickory brooms.  
1 cross-cut saw.  
1 hatchet.  
3 door-mats.  
1 dozen window-lights.  
4 tons of stove-coal.  
1 dust-pan.  
2 dust-brushes.  
2 feather dusters.  
2 hair head-brushes.  
2 stove-shovels.  
1 bath-tub.  
1 blank roll-book.  
1 step-ladder.

## List of members of No. 2 Engine Company.

Name.	Age.	Occupation.	Residence.
William A. Shedd, foreman .....	37	Machinist .....	311 Fourteenth street, n. w.
Samuel Dawes, engineer .....	40	Carpenter .....	614 H street, n. w.
William Leeman, fireman .....	42	Machinist .....	122 B street, n. e.
Samuel Edwards, hostler .....	33	Blacksmith .....	1530 Q street, n. w.
Charles Mead, private .....	38	Carpenter .....	467 I street, n. w.
Joseph Lemman, private .....	23	Blacksmith .....	523 Eleventh street, n. w.
John Maddox, private .....	41	Wheelwright .....	1010 F street, n. w.
William Belt, private .....	31	Carpenter .....	912 F street, n. w.
Frank Wagner, private .....	36	Butcher .....	1354 D street, n. w.
William Mahoney, extra private .....	31	Laborer .....	149 Fayette street, Georgetown.

Respectfully submitted.

WM. A. SHEDD,  
Foreman.

MARTIN CRONIN, Esq.,  
Chief Engineer, District of Columbia Fire Department.

*Inventory of No. 3 Engine Company.*

WASHINGTON, D. C., June 30, 1879.

SIR: I respectfully submit the following list of property of Engine Company No. 3:

## ENGINEER'S DEPARTMENT.

1 second-class Amoskeag engine.	1 small ax.
7 wrenches, assorted.	3 gallons coal-oil.
1 socket-wrench.	1 ton splint-coal.
1 poker and shovel.	1 cord sawed and split wood.
1 hammer.	1 gum bucket.
1 jack-screw.	2 large oil-cans.
1 spanner for air-vessel.	1 feather duster.
1 thaw-cock.	2 pieces sponge.
10 feet steam-hose.	1 chamois-skin.
2 lamps.	2 gallons machine-oil.
1 Walton heater, for engine.	3 flat files.
3 extra engine-wheels.	1 round file.

## HOSE DEPARTMENT.

1 hose-carriage.	1 fire-ax.
1,000 feet canvas hose, in good condition.	2 lanterns.
1,300 feet canvas hose, in bad condition.	1 jack-screw.
500 feet leather hose, in bad condition.	1 canvas apron.
2 gum play-pipes.	1 plug-key.
2 Johnson pumps.	1 Nealy respirator.
200 feet life-line.	100 feet hose-line.
200 feet street-rope.	

## HOSTLER'S DEPARTMENT.

4 horses.	1 pitchfork.
1 set double harness, in good condition.	8 horse-blankets.
1 set double harness, in bad condition.	1 shovel.
2 sets double harness, worthless.	2 brooms.
2 riding-saddles.	1 horse-bucket.
2 bridles, old.	1 feed-box.

## FEED.

10 bushels oats.	500 pounds hay.
1 bushel bran and meal.	400 pounds straw.

## HOUSE DEPARTMENT.

12 iron beadsteads.	4 carpet-rugs.
30 mattresses, in bad condition.	40 yards linen crash.
10 white bed-spreads.	17 towels.
19 colored bed-spreads.	1 office-desk.
27 white blankets.	2 folding chairs.
18 arm-chairs.	1 looking-glass.
30 sheets.	2 brooms.
27 pillow-cases.	3 company books.
3 center-tables.	1 requisition-book.
3 table-covers.	2 clocks.
3 carpets.	8 window-curtains, good.
2 stair-carpets.	6 window-curtains, bad.

## STORE-ROOM.

10 pounds brown soap.	1 gallon castor-oil.
10 pounds castile soap.	2 wall-sweeps.
6 chamois-skins.	3 mops.
1 dozen papers tripoli.	1 handsaw.
1 pound acid.	2 shovels.
3 lanterns, good.	3 scrub-brushes.
3 lanterns, old.	2 pounds copper wire.

## STORE-ROOM—Continued.

6 extra lamp-globes.	3 nozzles.
12 sheets emery-cloth.	2 brass pipes.
6 sheets crocus-cloth.	3 halter-stems.
$\frac{1}{2}$ pound acid.	4 brooms, corn.
$\frac{1}{2}$ pound lampblack.	3 brooms, hickory.
15 pounds waste.	1 washer-cutter, broken.
4 feather dusters.	2 curry-combs and brushes.
1 ax.	2 flour-buckets.
3 small axes and holsters.	4 figure-8 rings and snap-hooks.
2 dust-pans.	$\frac{1}{2}$ dozen small snap-hooks.
1 pint arnica.	1 pound sponge.
3 dozen boxes matches.	

## MISCELLANEOUS ARTICLES.

1 extension-table (old).	50 feet small gum hose.
1 lot old cans.	3 singletrees for hose-carriage.
1 old stove.	2 old watering-pots.
1 lot old harness and straps.	1 extra pole for carriage.

*List of members of Engine Company No. 3.*

Name.	Age.	Occupation.	Residence.
S. D. Mackey, foreman .....	34	Clerk .....	313 I street, n. w.
Frank Lewis, engineer .....	39	Painter .....	C street, near Fourth street, n. e.
Walter Cox, fireman .....	33	Carpenter .....	North Capitol street, near C street.
Michael Kane, hostler .....	34	Hostler .....	317 Thirteenth street, n. e.
James Frasier, private .....	38	Sailor .....	807 East Capitol street.
William Kirkpatrick, private .....	32	Carpenter .....	51 D street, n. e.
James Nolan, private .....	29	Plasterer .....	714 C street, n. e.
Samuel Nelson, private .....	22	Carpenter .....	504 Sixth street, s. e.
Robert Dickson, private .....	26	Laborer .....	436 H street, n. w.
Robert A. La Bille, private .....	34	do .....	40 I street, n. e.
James Lowe, private, disabled .....	56	Carpenter .....	150 F street n. e.

Respectfully submitted.

SAML. D. MACKEY,  
Foreman Engine Company No. 3.

MARTIN CRONIN,  
Chief Engineer, District of Columbia Fire Department.

*Inventory of No. 4 Engine Company.*

WASHINGTON, D. C., September 22, 1879.

SIR: I most respectfully submit the following list of property of No. 4 Engine Company, from July 1, 1878, to June 30, 1879:

One two-story brick house, located on Virginia avenue, between Fourth and a-half and Sixth streets, southwest, with stable and hose-tower attached.

## ENGINEER'S DEPARTMENT.

1 third-class Silsby engine.	2 monkey-wrenches.
1 Gould heater.	2 pole-snaps.
1 goose-neck.	3 oil-caus.
2 blind-caps.	1 reducer.
2 extra wheels.	1 ten-gallon oil-can.
1 extra pole.	3 files.

## ENGINEER'S DEPARTMENT—Continued.

1 hammer.	1 pipe-wrench.
1 brace.	1 shovel.
1 extra wrench.	1 slice-bar.
2 pair plyers.	1 relief-valve.
1 pair dividers.	1 bench-vise.
1 5-gallon oil-can.	2 pole-straps.
1 1-gallon oil-can.	1 washer-cutter.
1 3-gallon oil-can.	1 wood-ax.
7 spaner-wrenches.	1 fine-wrench.
1 socket-wrenches.	1 whip.
2 tube-wrench.	1 rule.
1 T-wrench.	1 set stocks and dies.
2 slip-joints.	1 pipe-cutter.

## HOSTLER'S DEPARTMENT.

4 horses.	4 old headstalls.
2 new sets harness.	2 currycombs.
2 old sets harness.	2 horse-brushes.
4 hitching-straps.	2 collars.
2 old bridles.	1 mane-brush.
6 hame-straps.	2 pad-saddles.
2 old clipping-machines.	3 collar-pads.
1 harness-punch.	4 old halters.
3 halter-chains.	1 single set harness.
1 feather duster.	2 pitchforks.
1 old cutting-box.	2 extra pole snap and straps.
4 horse-hoods.	1 Dutch collar.
6 horse-blankets.	1 half-peck measure.
2 stable-buckets.	4 halter-stems.
2 extra whips.	1 hose-pick.

## HOSE DEPARTMENT.

1 hose-carriage.	1 pair sleeve-breeches.
3,800 feet cotton hose, in order.	1 carriage-whip.
350 feet cotton hose, in bad order.	200 feet street-line.
550 feet leather hose.	1 reducer.
2 branch-pipes.	50 feet life-line.
2 old pipes.	4 fire-axes.
6 nozzles.	1 gum bucket.
1 relief-nozzle.	4 half-traces.
1 pipe-holder.	2 pole-straps.
50 feet garden-hose.	2 carriage-lamps.
1 pair shafts.	5 ladder-straps.
2 jack-screws.	2 pole-snaps.
2 Johnson pumps.	4 extra half-traces.
4 figure-8 rings.	1 carriage-apron.
1 gooseneck.	1 spray-nozzle.
12 spanners.	1 Nealey's respirator.

## FURNITURE AND BEDDING.

12 iron bedsteads.	18 stair-pads.
22 mattresses.	10 window-shades.
40 sheets.	1 table-cover.
31 pillow-cases.	3 coal-hods.
34 blankets.	1 inkstand.
30 chairs.	1 dust-pan.
15 spittoons.	1 table.
2 time-clocks.	13 yards oil-cloth.
3 stoves and pipe.	2 door-mats.
3 looking-glasses.	50 yards carpet-crash.
1 writing-desk.	3 scrub-brushes.
2 new carpets.	2 feather dusters.
3 oil-rugs.	3 floor-mops.
6 pieces oil-cloth.	1 bath-tub.
1 stair-carpet.	1 watering-pot.



## FURNITURE AND BEDDING—Continued.

1 wisp-broom.	3 pieces old oil-cloth.
2 hair-combs.	3 pieces zinc.
2 hair-brushes.	1 washstand.
1 water-cooler.	4 pictures.
1 frame of rules.	2 dust-brushes.
1 alarm gong.	5 glass globes.
2 old carpets.	1 wall-brush, long handle.

## STORES ON HAND.

10 pounds cotton waste.	5 lamp-wicks.
20 sheets emery cloth.	1 lamp-globe.
12 papers tripoli powders.	1 chamois-skin.
2 pound oxalic acid.	3 tons hard coal.
8 pieces sponge.	1 ton sp'nt coal.
3 bars castile soap.	1 cord S. S. and split wood.
25 bars brown soap.	3 gallons lard-oil.
5 bushels oats.	5 pounds packing.
300 pounds hay.	2 gallons linsed oil.
600 pounds straw.	1 gallon varnish.
$\frac{1}{2}$ gallon arnica.	6 floor-mops.
15 pounds flaxseed meal.	2 carpenter's planes.
1 saw.	1 adz.
1 hatchet.	2 whitewash-brushes.
25 pounds white lead.	5 pounds nails.
2 gallons coal-oil.	$\frac{1}{2}$ gallon sturgeon-oil.

## EXTRA APPARATUS.

- 1 second-class Amoskeag engine, complete
- 1 fuel-cart, complete.
- 1 old truck in bad order.

*List of members of No. 4 Engine Company.*

Name.	Age.	Occupation.	Residence.
William T. Sorrell, foreman	44	Mariner	412 Twelfth street, n. w.
Levi Moling, engineer	35	Blacksmith	609 D street, s. w.
Francis Donnelly, fireman	36	Pattern-maker	309 D street, s. w.
John Waldron, hostler	32	Laborer	405 Fourth-and-a-half street, s. w.
F. H. Myers, private	37	Carpenter	1218 Union street, s. w.
William Ricks, private	28	Engineer	718 Sixth street, s. w.
William White, private	37	Brickmaker	124 Willow Tree alley, s. w.
Thomas J. Coffey, private	24	Laborer	306 C street, s. w.
James Creamer, private	24	do	610 Maryland avenue, s. w.
Charles Boss, private	28	Scroll-sawer	503 G street, s. w.

Respectfully submitted.

WM. T. SORRELL,  
Foreman No. 4 Engine Company.

MARTIN CRONIN, Esq.,  
Chief Engineer, District of Columbia Fire Department.

*Inventory of No. 5 Engine Company.*

WASHINGTON, D. C., September 22, 1879.

SIR: I most respectfully submit the following list of property of No. 5 Engine Company up to July 1, 1879:

One two-story brick house, in bad condition, on High street, between Grace and Bridge streets, with large bell and hose tower attached.

## ENGINEER'S DEPARTMENT.

1 double-pump second-class Amoskeag engine, complete.	4 lanterns.
1 Basshor coil-heater.	3 old sets crank-brasses.
4 extra heater-cocks.	4 monkey-wrenches.
1 Printze's relief-valve.	4 chain half-traces.
4 extra wheels.	2 pole-chains.
2 squirt-cans.	1 extra pole.
2 machine-oil cans.	2 extra sets grate-bars with extra centers.
2½ gallons machine-oil.	1 grate-pattern.
1 screw-jack.	5 old gum springs.
11 small files.	4 extra glass water-gauges.
13 large files.	1 quart castor-oil.
2 shovels.	8 balls lamp-wick.
1 slice-bar.	3 pounds Selden's packing.
2 tube-scrappers.	20 pounds cotton waste.
1 tube-brush.	3 pounds gum packing.
2 sets of Jones sleeve-connections.	¼ cord sawed and split wood.
1 reducer.	1½ tons splint coal.
1 plug-thawer.	3 seat-cushions.
1 hand-ax.	2 brass pipes and nozzles.
3 old spring-clamps.	1 extra nozzle.
1 lead rope.	2 clocks.
1 brass plug.	2 gongs.
1 old blow-off cock.	1 leather gong-strap.
6 tube irons.	1 extra steam-gauge.
4 air-chamber spanners.	1 register-gauge.
1 small cut-off valve.	1 plug-key.
1 feather duster.	10 pounds tallow.
1 vise and bench.	5 gallons coal-oil.
30 feet of rope.	2 coal-oil cans.
1 plug-wrench.	4 extra axle-nuts.
32 old valve-springs.	2 open spring-links.
8 old pump-cups.	5 pulleys.
13 wrenches.	1 gum bucket.

## HOSE DEPARTMENT.

1 4-wheel hose carriage with 1,400 feet of cotton, rubber-lined, hose.	50 feet of rope for tower.
850 feet of hose, extra.	1 fire-ax and holder.
450 feet of hose in bad condition.	3 sets of Jones hose-connections.
5 leather hose-pipes and nozzles	2 sets of gum for Jones couplings.
4 spray nozzles.	2 extra springs.
1 pipe-holder.	1 large nut-wrench.
1 well-wheel for hose-tower.	1 leather gooseneck.
25 wooden pegs for hose-tower.	1 large hose oil-can.
4 ladder-straps.	1 feather duster.
2 jacks.	3 pipe-rack.
4 lanterns.	1 hose-tap.
1 reflecting lamp.	1 seat-cushion.
2 Johnson's force-pumps and holders.	3 spool-straps.
1 plug-wrench.	5 spanners.
1 plug-key.	5 hose-patches.
1 reducer.	2 fenders for hose-tower.
1 gum bucket.	3 extra brake-blocks.
1 pair shafts.	4 gum bumpers.
4 extra wheels.	2 smoke-caps.
1 extra pole.	1 smoke-cap box.
2 extra singletrees and half-traces, leather.	200 feet cotton rope.
4 old half-traces, leather.	5 small pick-axes and scabbards.
	1 leather pocket.
	1 cut-off nozzle.

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## HOUSE DEPARTMENT.

- |   |                                   |
|---|-----------------------------------|
| 1 fire-alarm gong.  | 1 bucket for coffee.              |
| 1 Morse key and sounder.  | 4 pounds sugar.                   |
| Schneider's improvement for releasing horses from their stalls by the stroke of the gong. | 2 pounds coffee.                  |
| 10 iron bedsteads.  | 1 feather duster.                 |
| 10 compensating bed-springs.  | 2 hair dust-brushes.              |
| 22 mattresses.  | 1 washer-cutter.                  |
| 11 feather pillows.   | 1 copper boiler.                  |
| 9 hair pillows.   | 1 hand-saw.                       |
| 39 double white blankets.   | 1 hatchet.                        |
| 1 white single blanket.   | 2 step-ladders.                   |
| 3 gray blankets.  | 3 company books.                  |
| 78 sheets.  | 3 blank-books.                    |
| 28 pillow-slips.  | 1 Worcester's Dictionary.         |
| 10 towels.  | 10 bound rules and regulations.   |
| 41 bed-spreads.   | 1 fire-alarm card.                |
| 19 spittoons.   | 1 requisition-book.               |
| 18 chairs.  | 4 tons hard coal.                 |
| 1 bath-room oil-cloth.  | 1 district card.                  |
| 2 stair-carpets.  | 1 rules and regulations card.     |
| 1 stair oil-cloth.  | 3 pieces zinc.                    |
| 16 brass stair-rods.  | 2 squirt-cans.                    |
| 6 floor-mats.   | 1 bottle of ink.                  |
| 1 clock.  | 1 pair scissors.                  |
| 1 table.  | 1 paper-cutter.                   |
| 1 writing-desk.   | 6 scrubbing-brushes.              |
| 16 window-shades and fixtures.  | 2 benches.                        |
| 1 looking-glass.  | 3 fire alarm keys.                |
| 3 combs.  | 2 inside keys.                    |
| 3 brushes.  | 1 master key.                     |
| 2 book-cases with 160 bound volumes.  | 6 floor-mops.                     |
| 12 lockers.   | 6 floor-mop handles.              |
| 1 water-cooler and stand.   | 1 sprinkling-can.                 |
| 3 buckets.  | 60 feet of street-hose and pipe.  |
| 2 stoves and pipes.   | 4 whitewash-brushes.              |
| 2 coal-hods.  | 1 dust-pan.                       |
| 4 stove-brushes.  | 2 door-ropes and rings and hooks. |
| 2 small shovels.  | 2 pair wire pliers.               |
| 1 large shovel.   | 2 pair gas-tongs.                 |
| 8 tin cups.   | 1 bottle of nomenclature.         |
| 8 spoons.   | 3 scaling-hooks.                  |
| 1 coffee-pot.   | 1 bath-tub.                       |
| 1 bucket for sugar.   | 1 wash-stand.                     |
|   | 1 urinal.                         |
|   | 1 water-closet.                   |

## HOSTLER'S DEPARTMENT.

- |                                  |                                       |
|----------------------------------|---------------------------------------|
| 4 horses.                        | 1 set of improved pole-straps, snaps. |
| 4 sets double harness, complete. | and figure-8 rings.                   |
| 1 half set of double harness.    | 6 old figure-8 rings.                 |
| 1 Dutch collar and pads.         | 2 old pole-strap snaps.               |
| 8 horse-blankets.                | 1 watering-trough.                    |
| 8 horse-hoods.                   | 1 old wagon.                          |
| 1 clipping-machine.              | 2 shovels.                            |
| 2 buckets.                       | 2 stable-brooms.                      |
| 3 currycombs.                    | 2 pad-saddles.                        |
| 4 horse-brushes.                 | 4 extra bridles.                      |
| 2 horse-scrapers.                | 3 extra bits.                         |
| 4 pitchforks.                    | 10 halter-straps.                     |
| 4 surcingle.                     | 1 halter-chain.                       |
| 1 nose-bag.                      | 4 hitching-straps.                    |
| 4 line-chains.                   | 1 hay-cutter.                         |
| 2 pair leather lines, extra.     | 2 cans harness-oil.                   |
| 1 extra collar.                  | 1 head-halter.                        |
| 1 peck-measure.                  | 1 single and 1 double block.          |
| 2 horse-boots.                   | 100 feet rope.                        |

## HOSTLER'S DEPARTMENT—Continued.

1 harness-punch.	2 feed-bins.
5 whips.	1 box for mixing feed.
1 whip-thong.	1 sifter.
1 pair clipping-shears and comb.	1 wheelbarrow.
1 mane and tail card.	1 quart turpentine.
4 linen horse-covers.	$\frac{1}{2}$ pint oil of spike.
12 hame-straps.	$\frac{1}{2}$ gallon arnica.
8 extra collar-pads.	$\frac{1}{2}$ pint oil of organum.
6 extra pole-straps.	$\frac{1}{2}$ bushel salt.
2 mane-combs.	$\frac{1}{2}$ pint sweet spirits of niter.
4 figure 5.	

## FORAGE.

30 bushels oats.	300 pounds straw.
500 pounds hay.	$\frac{1}{2}$ peck flax-seed meal.

## STOREHOUSE DEPARTMENT.

20 papers eagle tripoli.	10 corn brooms.
10 pounds castile soap.	4 chamois.
3 pounds rotten-stone.	8 lamp-globes.
$1\frac{1}{2}$ pounds stove polish.	2 extra lanterns.
3 pounds oxalic acid.	2 papers copper rivets.
4 pounds whiting.	1 brass cock.
10 lamp-wicks.	16 snap hooks.
3 pounds sponges.	$1\frac{1}{2}$ pounds copper wire.
5 papers of sapolio.	12 pounds white lead.
12 lamp-burners.	$\frac{1}{2}$ gallon turpentine.
10 pounds nails.	1 gallon boiled oil.
4 papers tacks.	1 gallon raw oil.
20 sheets of croens cloth.	$\frac{1}{2}$ pound nuber.
40 sheets of emery cloth.	1 pound camphor.
10 boxes matches.	8 boxes roach-powder.
4 boxes axle-grease.	1 barrel lime.
6 pounds brown soap.	1 feather duster.

## ASSISTANT CHIEF ENGINEER'S DEPARTMENT.

1 carriage.	2 horse-boots.
1 horse.	1 whip.
2 extra pairs shafts.	2 extra breeching-straps.
4 extra wheels.	1 set of old leather half traces.
1 lamp and globe.	4 extra shaft-tags.
1 lamp-rack.	1 gum bit.
1 reflecting-lamp.	1 extra bit.
3 sets of single harness.	2 extra harness saddle-pads.
1 gum horse-cover.	1 linen horse-cover.
2 lap-ropes.	1 horse-blanket.
1 extra bridle.	

*List of members of Engine Company No. 5.*

Name.	Age.	Occupation.	Residence.
L. P. Lowe, foreman	29	Clerk	133 Dunbarton street.
Edward Rhodes, engineer	40	Engineer	23 Second street.
J. D. Angel, fireman	31	do	31 Congress street. BRICE
J. H. Mahorney, hostler	37	Carpenter	14 Third street.
James Cleveland, private	36	Shoemaker	168 Bridge street.
Churchill Hunt, private	32	Laborer	1918 New York avenue.
F. J. Snyder, private	35	do	132 Frederick street.
A. J. Sullivan, private	28	Blacksmith	22 Frederick street.
J. W. Kurtz, private	26	Carpenter	106 Valley street.
T. C. Whelan, private	29	Laborer	160 High street.

Very respectfully,

LOUIS P. LOWE,  
Foreman No. 5 Engine Company.

MARTIN CRONIN, Esq.,  
Chief Engineer, District of Columbia Fire Department.

*Inventory of No. 6 Engine Company.*

WASHINGTON, D. C., September 19, 1879.

SIR: I most respectfully submit the following list of property of No. 6 Engine Company, up to July 1, 1879.

This company occupies one of the new houses lately built, and is located on Massachusetts avenue, between Fourth and Fifth streets northwest.

## ENGINEER'S DEPARTMENT.

1 Clapp & Jones engine.	1 oil-can.
1 Gould heater.	1 reducer.
1 spring-bottom oil-can.	1 screw-jack.
2 spanners.	1 cord pine wood.
1 screw-socket wrench.	2 tons soft coal.
1 screw-driver.	2 tons heater coal.
1 packing-box wrench.	1 old set gunn-valves.
1 hammer.	3 gallons lard-oil.
2 hose-spanners.	2 monkey-wrenches.
1 poker.	6 boiler-tubes.
2 brass pipes.	1 vise.
5 pounds cotton waste.	1 washer-cutter.
4 papers tripoli.	$\frac{1}{2}$ pound oxalic acid.
3 sheets emery cloth.	3 sheets croens cloth.

## HOSTLER'S DEPARTMENT.

5 horses.	3 curry-combs.
3 sets double harness.	2 new horse-brushes.
2 sets single harness.	3 old horse-brushes.
1 Dutch collar.	$\frac{1}{2}$ -peck measure.
1 lot old harness.	2 old scoop-shovels.
4 horse-blankets.	2 new shovels.
1 block and fall.	4 hitching-straps.
6 cans harness-oil.	2 new saddles.
2 feed-bins.	1 old saddle.
3 stable-brooms.	1 riding-bridle.
1 harness-punch.	2 whips.
1 pair shears.	3 pitchforks.
4 surcingle.	1 gunn cover.
2 old bridles.	1 gunn hood.
1 pair pole-strap snaps.	2 old buckets.
1 wagon-pole.	2 old surcingle.
1 new clipping machine.	1 lot old collars.
1 old clipping-machine.	1 old set traces.

## HOSE DEPARTMENT.

1 hose carriage with	4 gunn pipes.
900 feet paragon hose.	2 leather-pipes.
650 feet extra paragon hose.	2 reducers.
1 Johnson pump.	6 ladder-straps.
150 feet life-line.	2 axes.
1 pipe-holder.	2 lamps.
2 extra single-trees.	2 spool-straps.
2 extra lamp-irons.	2 ax-handles.
2 old chamois-skins.	9 lamp-globes.
1 piece sponge.	1 lot nozzles.

## HOUSE DEPARTMENT.

13 old arm-chairs.	1 Morse key and sounder.
1 old table.	1 fire-alarm gong.
1 coal-sieve.	2 12-light chandeliers.
1 lot old rope.	1 4-light chandelier.
1 lot new rope.	24 globes.
2 stoves.	12 iron bedsteads.

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## HOUSE DEPARTMENT—Continued.

23 mattresses.	1 looking-glass.
13 feather pillows.	1 wash-stand.
5 hair pillows.	1 urinal.
12 old bed spreads.	12 old bedspreads.
1 requisition-book.	32 blankets.
3 company-books.	27 cotton sheets.
1 old water cooler.	28 cotton pillow-cases.
1 copper boiler.	21 office-desks.
15 gum spittoons.	2 wooden benches.
$\frac{1}{2}$ ton hard coal.	5 door-mats.
1 basket.	1 hatchet.
1 large table.	1 handsaw.

## STORES ON HAND.

6 corn brooms.	12 sheets emery-cloth.
6 floor-mops.	12 sheets crocus-cloth.
6 chamois-skins.	2 feather dusters.
5 gallons coal-oil.	25 pounds waste.
6 boxes axle-grease.	25 pounds brown soap.
12 papers tripoli.	25 pounds castile soap.
1 pound whiting.	1 pound acid.
25 feet $\frac{3}{4}$ -inch hose.	12 boxes matches.

## HORSE FEED.

60 bushels oats.	6 bushels bran.
1,000 pounds hay.	2 bushels meal.
800 pounds straw.	$\frac{1}{4}$ bushel flaxseed meal.

## MISCELLANEOUS ARTICLES.

1 old feather duster.	2 old coal-hods.
1 lot old nozzles.	2 coffee-buckets.
1 dust-pan.	2 fire-alarm-box keys.
2 dust-brushes.	2 wall-brushes.
1 lot old junk.	1 old horse-blanket.
1 old ax.	2 old oil cans.

## List of members of No. 6 Engine Company.

Name.	Age.	Occupation.	Residence.
Charles E. Merilat, foreman .....	32	Plumber .....	740 Fourth street, n. w.
Thomas Martin, engineer .....	32	Blacksmith .....	902 Fourth street, n. w.
Calliom Clark, fireman .....	40	Laborer .....	1215 L street, n. w.
Alexander Savoy, hostler .....	36	Barber .....	218 G street, n. w.
Joseph Daniels, private .....	35	Jeweler .....	316 K street, n. e.
John Brosnan, private .....	26	Paver .....	110 L street, n. w.
John Maker, private .....	35	Waiter .....	925 Tenth street, n. w.
Patrick Carroll, private .....	30	Blacksmith .....	732 Fourth street, n. w.
William Ennis, private .....	29	Laborer .....	410 H street, n. w.
Henry Steele, private .....	30	Blacksmith .....	410 H street, n. w.
Howard Wright, private .....	28	Carpenter .....	411 New York avenue, n. w.

Respectfully submitted.

CHAS. E. MERILAT, Foreman.

MARTIN CROXIN, Esq.,

Chief Engineer, District of Columbia Fire Department.

*Inventory of Truck Company A.*WASHINGTON, D. C., *September 21, 1879.*

SIR: I most respectfully submit the following list of property of A Truck Company from February 17, 1879, to June 30, 1879.

One two-story brick house with stable and out-houses attached, the property of the District, located on North Capitol street between B and C streets, north.

## TILLERMAN'S DEPARTMENT.

- |   |                                 |
|---|---------------------------------|
| 1 hook-and-ladder truck, Buckley & Merritt patent, of New York, N. Y.           | 5 ladder-straps.                |
| 11 ladders of different lengths, including Chief Cronin's patent aerial ladder. | 1 anger with handle.            |
| 1 platform to raise large ladder on.  | 1 R. hammer.                    |
| 10 small fire-hooks.  | 1 pipe-holder.                  |
| 1 grapnel hook with chain.  | 1 brass oil-can.                |
| 4 hand-lanterns.  | 1 battering-ram.                |
| 2 side lamps.   | 1 pair extra tongs.             |
| 1 crow-bar.   | 4 gum buckets.                  |
| 3 pitchforks.   | 2 picks.                        |
| 1 gas-key.  | 2 pickaxes.                     |
| 3 life-lines (75 feet each).  | 2 axes.                         |
| 1 14-inch gong.   | 1 whip-holder.                  |
| 1 shingle-spade.  | 1 feather duster.               |
| 2 ladder-poles.   | 21 straps.                      |
| 2 respirators (Neally's patent).  | 11 spare bolts and nuts.        |
| 2 monkey-wrenches.  | 4 half-traces with snaps.       |
| 1 wheel-wrench.   | 2 pole-straps with snaps.       |
| 1 wheel-jack.   | 1 cushion for driver's seat.    |
| 3 Johnson pumps.  | 1 cushion for tillerman's seat. |
| 1 pair pliers.  | 1 ladder-stay (wire rope).      |
| 2 chamois skins.  | 2 side guys (wire rope).        |
| 2 pieces of sponge.   | 1 set of halyards (manila).     |
|   | 2 files (1 round, 1 square).    |

## HOSTLER'S DEPARTMENT.

- |                                    |                             |
|------------------------------------|-----------------------------|
| 2 horses.                          | 2 bushels of bran.          |
| 2 sets of double harness complete. | 2 bushels of meal.          |
| 1 Dutch collar with traces.        | 1 half-peck of flaxseed.    |
| 1 R. saddle.                       | 1 half-peck of coarse salt. |
| 2 surcingles.                      | 1 peck measure.             |
| 1 clipping-machine.                | 1 oat-screen.               |
| 1 punch.                           | 2 horse-blankets.           |
| 3 horse-brushes.                   | 2 horse-covers.             |
| 4 currycombs.                      | 2 pitchforks.               |
| 2 bits (ex.).                      | 1 shovel.                   |
| 2 chamois-skins.                   | 1 horse-bucket.             |
| 1 mane-comb.                       | 1 whip.                     |
| 2 mane-brushes.                    | 1 corn broom.               |
| 3 halter-straps.                   | 1 stable-broom.             |
| 1 clipping-comb.                   | 1 quart of arnica.          |
| 1 pair shears.                     | 1 feed-bin.                 |
| 500 pounds of hay.                 | 1 watering-trough (iron).   |
| 300 pounds of straw.               | 1 extra pole-snap.          |
| 15 bushels of oats.                |                             |

## BEDDING AND FURNITURE.

12 iron bedsteads.	1 bookcase.
12 bed-springs.	8 oaken chairs.
12 mattresses.	2 looking-glasses.
12 hair pillows.	2 chandeliers with 19 glass globes at tached.
34 sheets.	5 hall-lights.
44 blankets.	5 brackets.
20 bedspreads.	2 towel-racks.
24 pillow-slips.	2 soap-dishes.
12 towels.	12 tin spittoons.
1 bedroom carpet.	5 gum spittoons.
1 parlor-carpet.	4 door-mats.
1 sitting-room carpet.	1 door-rug.
1 foreman's-room carpet.	1 table-cloth.
1 stair-carpet and oil-cloth.	1 table.
27 stair-logs.	9 window-curtains with fixtures.
1 oil-cloth for wash-room.	3 stoves.
1 oil-cloth for hall.	3 stove-zincs.
24 B. W. chairs.	2 fire-shovels.
1 leather lounge.	2 poker.
1 writing-desk.	

## STORES ON HAND.

4 cans of harness-blackng.	1 tiller-bar.
1 pipe-holder.	2 coils of manila rope.
12 papers of tripoli.	5 ax-handles.
$\frac{1}{4}$ pound of acid.	1 gum-spittoon.
$\frac{1}{4}$ gross of matches.	4 tin-cups.
2 pounds of sponge.	2 corn-brooms.
4 chamois-skins.	2 old stoves with stove-pipe.
4 cotton mops.	1 whip.
5 pounds of cotton-waste.	2 dirt-shovels.
5 balls of lampwick.	1 scoop-shovel.
9 papers of stove-polish.	1 door-mat.
2 gallons boiled oil.	1 brass oil-can.
1 gallon C varnish.	1 brass reducer.
1 gallon turpentine.	1 box axle-grease.
15 pounds of L lead.	1 pint of castor-oil.
1 pound Paris green.	1 stove-zinc.
1 pound of burnt umber.	1 handsaw.
1 stable-broom.	1 hatchet.
12 sheets of emery-cloth.	2 5-gallon coal-oil cans.
6 sheets of crocus-cloth.	1 gallon coal-oil.
$\frac{1}{4}$ pound of copper wire.	2 scrub-brushes.
1 monkey-wrench.	2 pounds castile soap.
1 washer-cutter.	10 pounds B soap.
10 pounds of nails.	

## MISCELLANEOUS.

50 feet of street-hose.	1 record-book.
2 coal-hods.	1 fire-alarm-box key.
1 step-ladder.	1 master-key.
1 water-cooler and stand.	1 relief-key.
1 water-boiler.	2 tons of stove-coal.
2 feather dusters.	2 tons of engine-coal.
2 dust-pans.	$\frac{1}{4}$ cord of wood.
1 floor-brush.	1 coat-rack.
2 paint-brushes.	1 tin cup.
2 whitewash-brushes.	1 cotton mop and handle.
2 dust-brushes.	2 corn brooms.
4 stove-brushes.	2 gum buckets.
1 requisition-book.	4 door straps.
1 account-book.	



# 104 REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA.

## List of members of "A" Truck Company.

Name.	Age.	Occupation.	Residence.
George D. Spillman, foreman ..	34	Laborer .....	221 Third street, n. e.
Daniel F. Craven, tillerman...	27	Seaman .....	229 Tenth street, s. e.
Jerry O'Leary, hostler .....	29	Blacksmith .....	North Capitol and G streets, n.
John Kane, private .....	29	Plasterer .....	19 Second street, n. e.
Thomas W. Scott, private .....	30	Carpenter .....	517 Eighth street, s. e.
Thomas R. Williams, private ..	22	Bricklayer .....	815 East Capitol street, s. e.
John Melson, private .....	36	Laborer .....	325 B street, n. e.
Richard Sweeney, private .....	26	Laborer .....	103 Sixth street, s. e.
Horace Heimline, private .....	30	Laborer .....	409 A street, n. e.
John Sherman, private .....	34	Laborer .....	934 Third street, n. w.
Samuel R. Henry, private .....	29	Clerk .....	22 Second street, n. e.
William Luskey, private .....	30	Laborer .....	

Respectfully submitted.

DAN'L F. CRAVEN,  
Tillerman in charge "A" Truck Company,  
District Columbia Fire Department.

MARTIN CRONIN, Esq.,  
Chief Engineer, District Columbia Fire Department.

One second-class Amoskeag engine complete.

## Inventory of Truck Company B.

WASHINGTON, D. C., September 19, 1879.

SIR: I most respectfully submit the following list of property of Truck Company B for fiscal year ending June 30, 1879:

- |  |                          |
|--|--------------------------|
| 1 two-story brick-house, the property of the District of Columbia, located on New Hampshire avenue, between Twenty-first and Twenty-second streets, northwest. | 1 augur.                 |
| 1 hook-and-ladder truck, Babcock patent, of Chicago, Ill.  | 3 Neally smoke-caps.     |
| 1 Bangor extension-ladder, with Chief Cronin's patent stand, lever, and raising apparatus complete.  | 8 gum buckets.           |
| 1 ladder 42 feet.  | 3 picket-lines.          |
| 1 ladder 35 feet.  | 2 life-lines.            |
| 1 ladder 26 feet.  | 6 axes.                  |
| 1 ladder 25 feet.  | 8 belt-axes.             |
| 1 ladder 20 feet.  | 4 pitchforks.            |
| 1 roof-ladder 16 feet.   | 1 shingle-spade.         |
| 1 scaling-ladder 14 feet.  | 1 scoop-shovel.          |
| 1 scaling-ladder 12 feet.  | 1 dirt-shovel.           |
| 1 ceiling-ladder 11 feet.  | 1 pair wire-cutters.     |
| 8 hooks, assorted sizes.   | 1 harness-punch.         |
| 4 crotch-poles.  | 1 monkey-wrench.         |
| 2 crowbars.  | 4 ladder-straps.         |
| 1 battering-ram.   | 1 wall hook and chain.   |
| 2 gas-keys.  | 2 leather cushions.      |
| 4 Johnson pumps.   | 3 service-lamps.         |
|  | 1 foreman's lamp.        |
|  | 2 side lamps, nickel.    |
|  | 1 16-inch gong.          |
|  | 2 pole straps and snaps. |
|  | 1 whip.                  |
|  | 2 gum spittoons.         |
|  | 1 cocoa mat.             |

## HOSTLER'S DEPARTMENT.

2 horses, one tolerably good and the other unfit for service.	2 old pole-snaps.
1 double set of old harness.	1 iron stall-hook.
1 old set of extra lines.	2 old surcingles.
1 pad-saddle.	2 old hitching straps.
2 sweat-scrapers.	1 old whip.
2 new currycombs.	1 half-peck measure.
2 old horse-blankets.	2 good pitchforks.
2 new horse-brushes.	1 old pitchfork.
2 new bridles and bits.	1 stable-shovel.
4 new half-traces and tugs.	1 old water-pot.
1 nickel-plated harness-punch.	1 cast-iron horse-trough.
2 old currycombs.	1 fine wire sieve.
2 old horse-brushes.	2 old sponges.
2 new linen horse-covers.	1 horse-bucket.
4 straps for front doors.	1 pair horse-clippers.
2 old figure-eight rings.	1 cocoa mat.

## TILLERMAN'S DEPARTMENT.

150 feet cotton rope.	1 old oil-can.
8 boxes axle-grease.	2 paper tripoli.
6 cotton dusters.	12 sheets emery-cloth.
2 sponges.	24 sheets crocus.
2 chamois-skins.	3 globes for lamps.
4 belt-axes.	2 new lamp-stays.
4 pick-axes.	6 lampwicks.
1 shingle-spade.	1 hammer.
1 leather smoke-cap.	4 steel chisels.
4 ax-handles.	1 new monkey-wrench.
1 truck-jack.	4 files.
1 cap-wrench.	1 pair tin-snips.
1 nut-wrench.	1 pair expansion-tongs.
1 dozen assorted bolts.	1 washer-cutter.
1 dozen snaps and rings.	1 hose-carriage bell.
10 feet copper wire.	$\frac{1}{2}$ gallon castor-oil.
1 old monkey-wrench.	5 pounds dry zinc.
1 dozen assorted straps.	2 gallons machine-oil.
$\frac{1}{2}$ pound ox. acid.	1 tank-apron.
$\frac{1}{4}$ pound whiting.	2 wall-picks.
$\frac{1}{4}$ pound plumbago.	1 reducer for hose.
1 part can harness-oil.	1 pair wire pliers.
300 feet manila rope.	1 small brass eagle.
50 feet wire rope.	1 screw-driver.
old irons from ladders.	2 file-handles.
2 pounds cotton-waste.	1 squirt-can.
4 new service-lamps.	

## HARNESS-ROOM.

1 oil-cloth.	1 dust pan and brush.
1 hat-rack with eleven hooks.	3 old wall-brushes.
1 water-cooler and stand.	2 brooms.
3 tin cups.	1 scrub bucket and brush.

## HALL-WAY.

1 oil-cloth.	1 gum spittoon.
2 cocoa mats.	1 hat and clothes rack with twelve hooks and eleven pegs.
1 clock.	

## SITTING-ROOM.

1 carpet.	1 wash-basin.
9 arm-chairs, wood.	1 soap-dish.
1 communicating instrument	4 pictures.
1 two-way gas-burner.	1 lace curtain.
1 globe.	1 window-shade.
1 small table.	1 gum spittoon.

## READING-ROOM.

1 carpet.  
1 writing-secretary and book-case.  
56 library-books.  
1 Turkish-leather lounge.  
5 cane-seat chairs.  
5 pictures.  
4 looking-glasses.

2 window-shades.  
2 side gas-brackets.  
1 globe.  
4 tin spittoons.  
4 oil-cloths for same.  
1 air-castle.

## DORMITORY.

11 iron bedsteads.  
11 spring-mattresses.  
11 hair and shuck mattresses.  
11 pillows.  
16 lace curtains.  
1 carpet.  
13 pictures.  
15 cane-seat chairs.  
1 clock.

2 window-shades.  
2 6-way gas-burners.  
12 globes.  
1 center-table.  
1 table-cover.  
2 air-castles.  
1 urn on table.  
1 sixteen-foot wall.

## STORES ON HAND.

1 hair-brush and comb.  
6 hat-hooks.  
7 tin cups.  
3 stove-brushes.  
1 monkey-wrench.  
2 squirt-cans.  
2 new curry-combs.  
4 feather dusters.  
2 dust-pans.  
2 dust-brushes.  
10 pounds brown soap.  
10 pounds castile soap.  
8 boxes matches.  
10 strap-hinges.  
1 pair butt-hinges.  
2 old wrought-iron hinges.  
4 saw-files.  
2 pieces window-shade.  
3 papers screws, assorted.  
2 boxes copper rivets and burs.  
2 papers tacks.  
4 sticks stove-black.  
2 new mops.  
1 can harness-black.  
1 pint arnica.  
1 pint varnish.  
 $\frac{1}{2}$  gallon sweet-oil.  
 $\frac{1}{2}$  gallon neat's-foot oil.  
 $\frac{1}{2}$  pint sweet spirits of niter.  
1 putty-knife.  
1 oil-stone.  
1 jack-plane.

1 fore-plane.  
1 smooth-plane.  
4 chamois-skins.  
8 pounds blue paint.  
5 pounds green paint.  
6 pounds vermilion red.  
6 pounds burnt umber.  
8 pounds nails.  
1 brace.  
12 bits, assorted.  
6 chisels, assorted.  
2 flat files.  
1 rat-file.  
1  $\frac{1}{2}$  round file.  
4 new paint-brushes.  
1 file-handle.  
2 small pulleys.  
1 screw-driver.  
1 hatchet.  
1 compass-saw.  
1 handsaw.  
1 mop-handle.  
1 5-gallon can.  
3 sponges.  
Brush and handle.  
4 tin spittoons.  
4 oil-cloths for same.  
1 cocoa mat.  
33 pillow-slips.  
48 blankets.  
48 sheets.  
17 towels.

## BATH-ROOM.

1 oil-cloth.  
1 bath-tub.  
2 water-closets.  
1 urine-basin.  
1 wash-basin.  
1 soap-dish.  
1 14-foot step-ladder.  
1 towel-roller.  
1 towel-bracket.  
3 pictures.  
1 old comb and brush.

2 window-shades.  
1 scrubbing-brush and bucket.  
1 old sponge.  
2 gum spittoons.  
1 dust-pan.  
1 dust-brush.  
2 brooms.  
4 clothes-hooks.  
1 wisp-broom.  
1 looking-glass.

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## VESTIBULE AND STAIRWAY.

1 carpet.  
1 mat.  
1 stairway carpet, crash, and pads.  
26 stair-rods and fixtures.  
2 pictures.  
1 window-shade.

2 tin spittoons.  
1 cane-seat chair.  
1 Gamewell gong.  
1 hall-burner.  
1 globe.

## FOREMAN'S ROOM.

1 carpet.  
5 pictures.  
1 iron bedstead.  
1 spring-mattress.  
1 hair and shuck mattress.  
1 writing-desk.  
1 record-book.  
1 ledger.  
1 requisition-book.  
1 pillow.

3 cane-seat chairs.  
2 tin spittoons.  
1 window-shade.  
1 2-way gas-burner.  
2 globes.  
1 glass inkstand.  
1 pair paper-shears.  
1 glass pen.  
1 paper-ruler.

## MISCELLANEOUS ARTICLES.

22 tons stove egg coal.  
2½ tons splint coal.  
¾ cord sawed and split wood.  
1 old suction sleeve.  
1 broken pole.  
1 amoskeag pole.  
4 amoskeag wheels, old.  
1 old goose neck.  
2 old single-trees.  
4 old stoves and stove-pipes.  
1 old air-chamber wrench.  
2 old ladder-hooks.  
3 old white-wash brushes.  
1 dirt-shovel.  
6 old leather truck-buckets.  
1 stable-broom.  
1 old broken hatchet.  
5 bushels oats.  
100 pounds hay.  
100 pounds straw.  
1 pair cellar steps.  
1 bushel plaster Paris.  
1 barrel lime.  
1 bushel cement.

3 stove-shovels.  
20 feet crown molding.  
2 old horse-hoods.  
200 feet old rope.  
1 broken truck-hook.  
1 5 gallon-can.  
1 blacking and shoe box.  
1 broken 10-foot ladder.  
1 piece of ladder 5 feet long.  
1 vise and bench.  
1 grinding-stone complete.  
2 coal-hods.  
12 boxes and pots of flowers.  
1 wheelbarrow.  
100 feet street-hose.  
3 mops and handles.  
2 kalsomine-brushes.  
3 old paint-brushes.  
6 pieces of zinc for stoves.  
1 trowel.  
40 feet wire rope.  
2 old truck-irons.  
12 books of rules and regulations.

## List of members of Truck Company B.

Name.	Age.	Occupation.	Residence.
James W. Springman, foreman	42	Farmer	521 Maryland avenue, s. w.
William Beynon, tillerman	31	Mariner	2414 N street.
Augustus Dunbar, hostler	36	Hostler	2112 N street.
Daniel Williams, private	38	Laborer	1212 Twenty-fourth street.
Robert Chamberlin, private	27	Blacksmith	27 Fayette street, Georgetown.
Thomas E. Newman, private	43	Blacksmith	909 New Hampshire avenue.
John W. Walker, private	41	Bricklayer	Virginia.
Edward Whyte, private	23	Carpenter	New Hampshire avenue, between M and N streets.
James Greaves, private	31	Machinist	131 Bridge street, Georgetown.
Thomas O'Brien, private	30	Laborer	501 Twentieth street, n. w.
James Murray, private	23	Florist	1164 Twenty-first street.
Robert Dickson, private	26	Waiter	450 H street, n. w.

APPENDIX G 3.—Detail statement of fires, losses, and insurance, accompanying chief engineer's report.

Date.	Hour.	Box.	Style of building.	Cause.	How occupied.	Owner or occupant.	Location.	Dam- age.	Insur- ance.
1878.	a. m.	p. m.							
1 July 3	6.10	71	Frame		Feed store	Lee	Corner 7th and O streets, n. w.	\$2,000	\$750
2 July 4	1.18	25	do		Restaurant			1,500	350
3 July 4	1.24	72	False	False	Stable	J. Walling	18th and Boundary streets, n. w.	1,000	1,000
4 July 6	1.50	217	Frame	Unknown	Feed loft	E. C. McDowell			
5 July 6	8.35	12	do						
6 July 8	1.30	71							
7* July 8	3.30	513			Clothing store	Katzenstein	7th street near D, n. w.		
8 July 11	9.50	17	3-story brick	Unknown					
9 July 18	11.50	143	False	False	Dwelling	Charles McNamee	6th street between O and H, n. e.	75	75
10 July 19	7.50	613	Frame	Accident	do	Mrs. Graves	4th near O, n. w.	50	50
11 July 20	12.30	24	do	Stove	do	B. Plumley	D near New Jersey avenue.	Slight	
12 July 22	11.30	12	Brick	Glue-pot	Carpenter shop			5,325	2,175
1 Aug. 2	10.55	721	Frame	Incendary	Dwelling		Bridge street near Frederick	500	500
2 Aug. 5	330	53	Chimney						
3 Aug. 7	2.50	134	Frame		Dwelling	John Driver	14th street near B, n. w.	500	400
4 Aug. 14	12.30	24	Brick	Matches	Grocery store	J. O'Neal	5th near O, n. w.	200	200
5 Aug. 20	11.15	513	Frame	Stove-pipe	Dwelling	J. Frazer	D between 7th and 8th, s. e.	50	
6 Aug. 25	8.52	141		Coal-oil explosion					
7 Aug. 31	4.40	132	Brick	Forge	Galvanized Works.	Whyte & Overman	Corner 13th and E, n. w.	150	100
1 Sept. 1	4.00	23	Frame	Line	Dwelling	C. H. Mervine	Columbia between 15th and 14th, n. w.	1,400	1,200
2 Sept. 5	1.55	214	do	Stove	do	J. Noonan		Slight.	
3 Sept. 9	8.25	25	do	Shavings	do			50	
4 Sept. 12	5.80	216	do	Chimney	do		M between 9th and 10th, n. w.	Slight	
5 Sept. 17	6.29	721	Brick	Unknown	Paper mill	George Hill	S near 17th street, n. w.	4,200	4,200
6 Sept. 27	2.10	131	do	Children, matches	Grocery	M. Goldard	Water and Potomac streets, Georgetown	4,000	400
7 Sept. 27	2.10	53	3-story frame	Incendary	Dwelling	M. Minor	Corner 12th and H streets, n. w.	50	
8 Sept. 30	2.25	134	Brick	Unknown	Cigar store	E. Poland	Corner 3d and C streets, s. e.	1,000	1,000
							Corner 13th and H streets, n. w.	5,700	5,600
1 Oct. 4	3.15	315	Brick	Incendary	Dwelling		M between 25d and 25th, n. w.	100	100
2 Oct. 6	2.30	315	Frame	do	do	J. Noonan	25th and I, n. w.	500	500
3 Oct. 7	10.15	32	do	do	do		K between 17th and 18th, n. w.	250	200
4 Oct. 11	7.00	34	do	Candle	do		Brilliant street, n. w.	Slight.	
5 Oct. 11	7.30	521	do	Stove	do			800	



APPENDIX G 3.—Detail statement of fires, losses, and insurance, accompanying chief engineer's report—Continued.

No. of fire.	Date.	Hour.	Box.	Style of building.	Cause.	How occupied.	Owner or occupant.	Location.	Damage.	Insurance.
1	1879.	a. m.	p. m.							
1	Feb. 1	.....	136	5-story brick	Sparks from chimney	Hotel	Willard's	14th and Pennsylvania avenue, n. w.	\$1,800	\$1,800
2	Feb. 2	.....	36	4-story brick	Defective flue	Dwelling	S. Johnson	H street between 17th and 18th, n. w.	1,000	3,000
3	Feb. 6	.....	12	2-story frame	Coal oil lamp	do	J. Madison	Madison alley, n. w. Q and R, n. w.	Slight	.....
4	Feb. 10	11.05	26	2-story brick	Stove	Clothing store	J. Stern	628 Pennsylvania avenue	100	100
5	Feb. 13	.....	17	3-story brick	Stove	do	.....	Intelligence Building, 7th street	Slight	.....
6	Feb. 14	6.10	124	4-story brick	Accident	Dwelling	N. Saigant	K between 3d and 4th streets, s. w.	1,800	800
7	Feb. 15	.....	32	2-story brick	do	do	Charles Wolf	East Capitol street, 1st and 2d, n. e.	2,000	2,000
8	Feb. 15	.....	4	2-story brick	Accident	Restaurant	.....	Corner 7th and O streets, n. w.	200	200
9	Feb. 18	12.57	125	do	Ashes	Photograph gallery	.....	708 7th street, n. w.	1,000	400
10	Feb. 20	.....	521	2-story brick	Unknown	Church	Mt. Sinai	Between 13th and 14th, n. e.	1,500	1,000
11	Feb. 20	12.40	521	2-story frame	Unknown	Dwelling	J. Wilson	2218 U street, n. w.	100	100
12	Feb. 21	.....	237	do	Defective flue	do	.....	930 New York avenue	1,500	1,500
13	Feb. 27	.....	137	3-story brick	Gas jet	do	James Collier	Alley between 1st and 2d G and H	.....	.....
14	Feb. 28	.....	63	2 3-story frames	Stove	do	.....	.....	13,000	11,900
1	Mar. 1	4.10	27	2-story frame	Unknown	Dwelling	Ann Hanley	Alley between 11th and 12th, n. w.	800	.....
2	Mar. 3	.....	24	2-story brick	Coal oil	do	B. Mann	428 O street, n. w. and 17th, n. w.	Slight	.....
3	Mar. 4	.....	1.40	22	1-story brick	Feed store	.....	M between 10th and 11th, n. w.	500	500
4	Mar. 4	10.00	13	3-story brick	Stove	Shoe store	H. Matzel	345 Pennsylvania avenue, n. w.	1,000	1,000
5	Mar. 8	00.35	72	2-story frame	Stove	Dwelling	S. Mann	1222 7th street, n. w.	Slight	.....
6	Mar. 10	.....	135	2-story frame	Incendary	Shed	K. Matzel	Alley between F and G, s. w.	900	900
7	Mar. 15	.....	1.30	3-story frame	Stove	Dwelling	Mr. Culvers	1229 L street, n. w.	.....	.....
8	Mar. 17	.....	9	2-story frame	Coal oil lamp	do	W. F. Slater	Corner 11th and W streets, n. w.	300	800
9	Mar. 17	.....	123	do	Coal oil	do	Mrs. Porgarty	1248 M street, n. w.	.....	.....
10	Mar. 23	.....	613	do	Stove-pipe	Shanty	Ellen Kelley	3d between H and I, n. e.	100	.....
1	Apr. 1	10.43	314	2-story frame	Stove-pipe	Dwelling	.....	24th street between G and H sts., n. w.	3,500	3,200
2	Apr. 1	.....	128	do	Tar kettle	do	.....	12th and E streets, n. w.	Slight	.....
3	Apr. 1	.....	53	do	Defective flue	do	W. C. Brooks	100 C street, s. e.	Slight	.....
4	Apr. 3	.....	125	do	Chimney	do	.....	6th and Massachusetts avenue	Slight	.....
5	Apr. 5	.....	27	Brick	Stove	do	C. Rodgers	1422 7th street, n. w.	Slight	.....
6	Apr. 6	1.45	69	2-story frame	Incendary	do	Var Quirk	Alley between 14th and 20th, n. w.	500	500
7	Apr. 9	9.55	32	do	Accident	do	W. Thompson	183 R street, n. w.	Slight	.....
8	Apr. 9	.....	217	3-story brick	do	do	M. P. Polwell	235 Pennsylvania avenue, n. w.	100	100
9	Apr. 9	.....	53	2-story brick	Gas in window	Plumbing store	W. Rothwell	618 Massachusetts avenue, n. w.	2,000	2,000
10	Apr. 19	2.30	125	4-story brick	Coal oil	Dwelling	M. Smith	F near 14th, n. w.	50	50
11	Apr. 20	.....	125	2-story brick	Unknown	do	.....	.....	.....	.....
12	Apr. 24	4.11	143	2-story brick	Chimney	Boot store	T. Barrett	11th street and New York avenue, n. w.	.....	.....
13	Apr. 24	10.41	134	do	do	Dwelling	.....	.....	.....	.....

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14	Apr. 21	9.40	23	do	Gas-jet	do	J. L. Elanghain	305 M street, n. w.	300
15	Apr. 23	8.20	127	do	Coal oil	do	A. West	816 9th street, n. w.	600
16	Apr. 26	10.30	143	do	do	do	do	827 Vermont avenue, n. w.	3,500
1	May 1	1.28	23	2-story frame	Stove-pipe	Dwelling	Mrs. Shano	612 New York avenue, n. w.	100
2	May 7	8.52	19	1-story brick	Chimney	School	N. Acker	E and New Jersey avenue, n. w.	150
3	May 9	11.10	131	Frame	Incendary	Shed	do	Alley between 10th and 11th sts, n. w.	Slight
4	May 15	1.17	38	do	Coal oil	Office	S. Stover	3 and 21st street, n. w.	50
5	May 18	1.40	53	do	do	Dwelling	Mrs. Flannigan	341 D street, s. e.	Slight
6	May 23	12.45	217	2-story brick	Unknown	Church	do	14th and Cedar streets, n. w.	Slight
7	May 23	11.56	126	Brick	Unknown	Stable	Burgdorff	86th between D and E streets, n. w.	15,000
8	May 24	11.58	214	3-story brick	Unknown	Dwelling	H. V. Boynton	1319 R street, n. w.	Slight
9	May 26	9.19	126	Brick	Incendary	Store	Miller & Gross	84th between D and Market Space	20,000
10	May 26	2.30	142	Frame	do	Chimney	do	1417 D street, n. w.	200
11	May 27	12.14	47	do	do	Stable	D. Toomey	321 G street, s. w.	200
12	May 29	7.30	36	do	do	do	do	do	35,500
1	June 1	10.18	613	Frame	Spontaneous combustion	Smoke-house	Johnson & Co.	4th and G streets, n. w.	26,300
2	June 3	11.45	523	do	do	Dwelling	E. Stewart	910 G street, n. e.	2,000
3	June 4	2.12	213	1-story frame	do	Store	H. Clay Jones	8th and Boundary, n. w.	1,800
4	June 4	2.15	28	For same fire	do	do	do	do	50
5	June 5	8.21	213	Frame	Chimney	Dwelling	M. Thompson	1629 Vermont avenue, n. w.	Slight
6	June 5	7.12	423	Brick	do	Carroll Hall	do	G street, between 9th and 10th, n. w.	500
7	June 10	3.40	423	do	Rubbish	Dwelling	do	do	500
8	June 11	5.04	141	do	Accidental	Concrete works	J. S. Baldwin	North Capitol, between K and L. n. e.	Slight
9	June 26	5.21	63	Frame	Lightning	Dwelling	do	14th and Massachusetts avenue, n. w.	3,050
10	June 27	10.27	141	Brick	do	do	do	do	2,300



## APPENDIX G 4

OFFICE FIRE-ALARM TELEGRAPH,  
*Washington, D. C., October 8, 1879.*

GENTLEMEN: In compliance with your request of September 9, 1879, I have the honor to present, through the board of fire commissioners, a detailed report of the transactions and expenditures of the fire-alarm telegraph, from the 1st day of July, 1878, to July 1, 1879, together with an estimate of the amount required for its support for the fiscal year ending June 30, 1881; also recommendations for increasing the efficiency of the same.

The expenditures of the fire-telegraph service for the twelve months covered by this report have been:

Salary of superintendent.....	\$1,500 00
Salary of two operators at \$1,200 each.....	2,400 00
Battery chemicals.....	808 41
New battery.....	205 00
Repairs, including removal of office.....	889 33
New furniture for office.....	141 48
Fuel and ice.....	11 18
Blacksmithing.....	19 75
Washing for office.....	24 00
Plumbing.....	4 56
Rent (six months) for office on Louisiana avenue.....	180 00

Total ..... 6,193 016

There are 80 automatic signal-boxes from which alarms are given directly through our system of fire telegraph, and in addition to these the several police stations are used and known as fire-alarm stations, but which are not connected telegraphically with nor under the control of the fire-alarm service. When these are used for transmitting alarms the dispatch is sent by telephone to police headquarters, and thence by messenger to the fire-alarm office, from whence it is again sent out over the wires to the engine-houses, thus consuming much precious time which might and ought to be saved by placing a regular signal-box at or near each police-station.

The fire telegraph, in all its details, continues to work in the most satisfactory manner, and, with the exception of some needed repairs specified in my last annual report, and which I have no doubt you will cause to be made during the present fiscal year, the lines are in very good condition, except that many of them are in too close proximity to the numerous telephone wires, which run in all directions, and which will be treated of under another head of this report.

It will be remembered that, owing to a clerical error, the compensation of the operators was cut down to \$1,000 each in the appropriation for the fiscal year ending June 30, 1880. I respectfully request that the deficiency of \$200 for each be made up by appropriation, so that these men may receive the compensation fixed by law for their services. They earn the full amount established by law, and ought to have it.

To defray the expenses of this department during the fiscal year ending June 30, 1881, it will be necessary to provide:

Salary for one superintendent.....	\$1,500 00
Salary for three operators, at \$1,200 each.....	3,600 00
Salary for one repairman.....	900 00
Supplies for battery.....	1,500 00
General repairs.....	1,000 00
Ice and washing for office.....	50 00
Blacksmithing.....	40 00
Contingent expenses.....	300 00

Total ..... 8,890 00

To promote the general usefulness of the fire-alarm telegraph, and to increase the efficiency of the same, fire-alarm boxes should be located at or near each of the following-named places, to wit:

First street and Indiana avenue, Third and G streets, First and K streets, Fifth and S streets, Tenth and V streets, Tenth and M streets, Fourteenth street and Rhode Island avenue, Tenth street and Louisiana avenue, Fourteenth street and Ohio avenue, Twelfth and F streets, Tenth and E streets, Fifteenth and S streets, Seventeenth and T streets, Twentieth and P streets, Eighteenth and L streets, Twenty-fourth and M streets, Twenty-fifth and I streets, Virginia avenue and E street, Eighteenth and H streets, and Sixteenth-and-a-half and H streets, all in the northwestern section of the city; also at Maryland avenue, Eighth and D streets, northeast; Second and F streets, northeast; Fifth and B streets, southeast; Fifth street and Virginia avenue, southeast; Eleventh and N streets, southeast; Eighth and G streets, southeast; Thirteenth and E streets, southeast; South Capitol and N streets, south; the Agricultural Department; Twelfth-street wharf; L street between Fourth-and-a-half and Sixth streets, southwest; Abbott School building, southwest; Second and D streets, southwest; and one each for the first, second, fourth, fifth, sixth, seventh, and eighth police precinct stations; making forty additional signal-boxes for Washington; also seven for Georgetown, to be located as follows: Corner of Green and Gay streets, corner of Congress and Dunbarton streets, corner of Eighth and Market streets, corner of Second and Warren streets, corner of Bridge and Frederick streets, corner of Potomac and Water streets, and corner of Monroe and West streets. The greater part of the expense for an increase in the number of boxes would be the purchase of the boxes themselves, as but little additional wire would be necessary, from the fact that when the new telegraph was erected, some three years since, it was then well known that additional signal-stations were even then much needed, but, owing to the limited appropriation, could not at that time be supplied; but the circuits were run with the idea in view of increasing the signal-stations at an early date, with but little outlay for wiring.

I therefore recommend the purchase of 47 signal-boxes at an early date, believing that property-owners in the several localities named are entitled to and should have the protection of our fire-alarm service.

It may be proper to mention, as a matter of fact which sooner or later must be grappled with, that, owing to the vast and constantly increasing number of telephone lines over the house-tops, in too close proximity to our wires, we must soon devise some plan for protecting the fire telegraph from obstruction by this network of wiring over nearly all the houses in the central parts of the city. The most practical way out of this difficulty, I think, will be to erect poles through such alleys as can be utilized for that purpose, and change our wires from the houses to such poles; and where proper alleys cannot be found, to put poles on the streets, or adopt a different house-top support, so as to get the fire-alarm wires securely out of reach of obstruction by other wires. The fire telegraph is far too important a factor of the fire department to be allowed to remain in a condition where obstructions are probable. Your attention is particularly invited to this subject, as, in my judgment, demanding a remedy, which, if neglected, may result seriously.

I also recommend the adoption of telephones, to be placed upon all our talking circuits, which connect the several engine houses and the office of chief engineer with the central office of the fire-alarm telegraph.

As a further means of increasing the efficiency of the service, I ur-

gently request that an additional operator and one repairman be provided, at the rates of compensation named in my estimates above, for the fiscal year next ensuing.

In conclusion, I beg to tender my sincere thanks to your honorable body, and to the fire commissioners, and all the members of the fire department, for your and their co-operation and courtesy towards the members of this force, and without which we could not have succeeded in our official duties as well as we have been enabled to do.

I also commend and thank Messrs. Richards and Noyes, operators, for their efficiency in the discharge of their onerous duties. These gentlemen have worked uncomplainingly from twelve to fifteen hours every day in the year; and in closing this report permit me to entertain the hope that relief may soon come to these overworked and faithful public servants by furnishing an additional operator, and also a repairman, to assist in so important a work.

I have the honor to be, gentlemen, your obedient servant.

HENRY R. MILES,

*Superintendent Fire-Alarm Telegraph.*

The Hon. COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

## H.—REPORT OF THE ATTORNEY.

OFFICE OF THE ATTORNEY  
FOR THE DISTRICT OF COLUMBIA,

*Washington, October 1, 1879.*

GENTLEMEN: The last annual report of this office bears date November 1, 1878. This will cover the eleven intervening months. At that time there were pending in the Supreme Court of the United States three important cases in which the validity of the special assessments of the late Board of Public Works were directly involved. Two of these—the first case, known as the Mattingly case, and the Seventh street road case, known as the Shoemaker case—had been argued and submitted at the close of the preceding term and remained undecided for want of time. Meantime Congress passed the act of June 19, 1878, to which I called the attention of the court on the second day of its then ensuing term, and thereupon a full reargument was ordered and had. The trials resulted in decrees for the District in both cases. The remaining case, known as the Columbus Alexander case, will be reached and disposed of at the term of the court now soon to commence. These decisions, with the recent legislation of Congress, must dispose of the dreary, expensive, profitless, and vexatious mass of litigation so burdensome to the District. The affirmation of the assessments by Congress overrides the question of invalidity, while the power to revise on demand of property-owners destroys the excuse for appealing to the courts. Under the advice of this office some thirty-four pending cases in equity have been settled under this legislation and these decisions, and little can remain in the others still pending.

Another case—Welch against the District—to enjoin the collection of a general tax on valuable mill-property in Georgetown, was a test of several cases. This was also tried and decided in favor of the District.

The District also has four other cases pending in the Supreme Court of the United States.

Some cases in the District courts were deemed of sufficient impor-

tance to be special referred to in my last report. Their further history may be briefly stated here.

The Campbell case, then pending before a referee, ripened to a report adverse to the District. On hearing of our exceptions the circuit court dismissed the case and the plaintiff appealed to the general term, where the case is now pending.

The Murtagh case: The general term set aside the former verdict. On retrial in the circuit, a verdict was rendered against the District for \$20,640.20. I took the case to general term on exceptions and motion for new trial, where it is now pending. We hope to have it heard soon.

The Strong cases: The abominable verdict in this consolidated case was set aside in the general term. On its being remanded to the circuit court, the order referring, the reference, the hearing and report by the referee, were all set aside on motion of the plaintiff, on whose application the reference was first made. The cases now stand severally for trial on the original pleadings. For reasons satisfactory to the commissioners Eugene Carusi, esq., was, at my request, associated with Mr. Miller, to whom I referred the cases in the further conduct of them in the circuit court. This is the only instance in which aid has been requested or desired by me.

The Dant case was taken to the Supreme Court of the United States by him, as he failed in the District courts.

The Young case: On second trial a verdict was for the District, and that is following the last above.

The Bartlett case awaits trial on issues of fact.

The Washington and Georgetown Railroad case stands ready for trial.

The cases of Chinn, Meredict, and Hine, General Birney for the District, secured a decision at the present general term which disposes of these cases in favor of the District. As this was done without a fee, the District is under obligations to General Birney, who kindly continued his charge of them. They were cases in which I had been retained for the plaintiffs.

The Cluss case is still pending in the United States Supreme Court.

For your information, it may be desired that I refer to some other causes.

In the case of the District against the Washington Market Company to recover the annual payment to the District of \$25,000, under the act incorporating the company, the general term sustained the judgment of the circuit court overruling our demurrer to the special plea. I then replied, and on trial in circuit court verdict went against the District. The case is on its highway to the Supreme Court of the United States. Notwithstanding the unanimity of the courts of the District, I am confident its decision will be reversed. This suit was commenced by the late Mr. Stanton for the District.

King against the District is the case in which the court decided a tax sale was void, not for any non-compliance with the law regulating sales of property charged with a delinquent tax, but because subsequently the sale was not reported to the register of deeds. A change in the laws by Congress prevents my securing a review of this case, and I finally advised a refunding of the purchase-money.

The case of Roderick to test the power of the commissioners to reduce the salaries of policemen, was decided by the general term in favor of that power.

The Georgetown College case, to recover interest on the money paid as a general tax, and refunded under the fourteenth section of the act

of June 11, 1878, was decided adverse to the college by the general term.

The case of Collins, now pending in general term, will, I trust, settle the question of the validity of ordinances of late board of health in favor of their legality, and enable us to deal with the bone-boilers.

In the Reed mandamus case, the general term decided that the commissioners had the power in the reorganization of the board of fire commissioners to exclude him.

In the Washington and Georgetown Railroad Company case, to recover license paid the District, the general term rendered judgment for the District. The Williams license case had the same result.

In the Brosnan case decision was adverse to the district.

In the O'Neal case the plaintiff recovered a considerable verdict on certain old sweeping contracts, and thereupon the general term swept off his verdict.

In the water-rate case, to which so much popular attention was given, heard before Judge Hagner, in August, the learned judge, in a very able and exhaustive opinion, decided every question made in the plaintiff's original bill, denying the power of the Commissioners in the premises, in favor of the District, deciding that the Commissioners had the power to readjust and fix the water rates precisely as they had done. By amendment of the bill a new point was raised, to wit, that the new rates should commence with the year 1880 and not with July, 1879, and so the court held. All parties seemingly are satisfied with Judge Hagner's ruling. It may be further stated that this question did not occur to the Commissioners until after their action in the premises, *as it did not to the counsel who brought the case into court*; that to the Commissioners their power was so clear in the premises that it was not deemed necessary to submit the general subject to this office. They may congratulate themselves that in this important matter, as in the case of Mr. Reed and the pay of the police, the court has sustained them.

About the current number of cases have been tried before juries in the circuit court, and with a very uniform result favorable to the District; with the exception of the Murtagh case no one has received a large verdict, while most of the plaintiffs have failed wholly.

The whole number of civil cases finally disposed of since the last report, 72; whole number of new civil cases commenced, 21; law, 14; equity, 7; against the District, 20; by the District, 1; now pending, 260; law, 119; equity, 141. Criminal cases (by Mr. Miller): Cases disposed of, 58; cases pending, 69. Amount of judgments, \$915; amount of judgments collected, \$781.26. Number of cases tried in police court, 3,524; amount of fines imposed, \$22,180. Opinions, number of which impressions taken: Riddle, 81; Miller, 28; covering pages 283. There were also a large number of opinions indorsed on papers. Number of printed briefs, 14; covering about 75 pages.

By the act of February 25, 1879, the District, in common with the persons residing in it, has seemingly lost the right to take a case to the Supreme Court of the United States where the money value involved is less than \$2,500. This works great hardship to the District especially. It frequently has a large class of cases, no one of which under that statute can be reviewed in the Supreme Court, as in the King case referred to above; that in effect declares void all the tax-sales for several years. The act should be so amended as to permit the District to take one of a special class to the Supreme Court, whatever may be the amount involved. The United States has the right of appeal in all cases arising in the Court of Claims (Rev. Stat. U. S., sec. 757), while claimants only

where the amount involves \$3,000. I would ask it for the District only where there was a class of cases involved.

Herewith find the report of Special Assistant J. E. Padgett, of the business in the police court, to which I invite attention. Also of E. C. Ingersoll, esq., who has charge of the revision of the laws of the District. This shows a very advanced state of the work, the whole of which meets my approval. He has appended a bill of the costs of material purchased on my requisition for use in the work, as well as the expenditures on all accounts for this labor.

I renew the recommendations of my last report as to the compensation of the chief and assistants of this office. (See annual report of the commissioners, p. 74.) Eleven months' additional experience shows that we can do nothing else in the profession but the duties of this office. It shows, also, that other business generally does not seek us.

I also recommend that an allowance of at least \$300 be made for rent of this office. I think it is the only public office in the United States, national, state, or municipal, not thus provided for.

Respectfully submitted.

A. G. RIDDLE,  
*Attorney for the District of Columbia.*

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

#### APPENDIX H 1.

ATTORNEY'S OFFICE, D. C.,  
October 6, 1879.

DEAR SIR: I have the honor to submit herewith a full report of the cases tried in the police court from November 1, 1878, to September 30, 1879, inclusive:

Number of cases tried.....	3,524
Convictions.....	3,060
Dismissals.....	345
Dismissals on production of license, &c.....	70
Suspended.....	6
<i>Not pros.</i> .....	15
Continued.....	16
Fines imposed.....	\$22,180

The above cases were distributed among the different classes of offenses as follows:

Bar open on Sunday.....	45
Barber-shop open on Sunday.....	2
Bar open after hours.....	3
Bathing in river.....	18
Building fire in street.....	1
Buying junk from minors.....	1
Concealed weapons.....	121
Contempt.....	4
Cruelty to animals.....	9
Destroying private property.....	44
Destroying public property.....	2
Destroying tree.....	5
Destroying tree-box.....	2
Disorderly conduct.....	951
Disturbing public school.....	1
Disturbing religious meeting.....	6
Driving over footway.....	9
Driving through funeral.....	9

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Enticing prostitution	3
Excavation without permit	11
Excavation without light	5
Extinguishing street light	1
Fast driving	25
Fast driving over bridge	2
Firing gun in street	12
Indecent exposure	73
Injuring pump	1
Keeping cow-yard	3
Mixing mortar on concrete pavement	1
Nuisances	88
Obstructing pound-master	4
Obstructing street	10
Placing ashes on street	1
Placing rubbish on street	7
Playing ball in street	10
Profanity	534
Refusing to pay hack hire	3
Selling light-weight bread	9
Selling liquor to minors	1
Selling on Sunday	4
Selling unsound food	3
Setting off fireworks in street	2
Throwing snowballs	10
Throwing stones	90
Trespassing on parks	43
Tying horse to tree	2
Unlawful measures	13
Unlawful scales	6
Unlicensed auctioneer	2
Unlicensed bar	101
Unlicensed book-agent	1
Unlicensed cattle-dealer	1
Unlicensed claim-agent	7
Unlicensed commercial agent	13
Unlicensed eating-house	5
Unlicensed hack	7
Unlicensed junk-dealer	2
Unlicensed livery stable	1
Unlicensed omnibus	1
Unlicensed pawnbroker	6
Unlicensed peddler	84
Unlicensed produce dealer	91
Vagrancy	32
Violating building regulations	16
Violating cart law	10
Violating coal regulations	25
Violating hack law	3
Violating health law	1
Violating hotel law	23
Violating market regulations	78
Violating snow law	2
Violating water law	1
Watering horse near pump	

In addition to the cases herein specified, there was a large number examined and not prosecuted because of the insufficiency of the evidence.

Very respectfully,

JAS. E. PADGETT,  
Special Assistant Attorney, D. C.

A. G. RIDDLE,  
Attorney for the District of Columbia.



## APPENDIX H 2.

WASHINGTON, D. C., October 4, 1879.

SIR: In obedience to your request for a report as to the present state of the work on the proposed Civil Code of Law and Procedure, &c., I have to report book 1 of the work complete, which comprises the *substantive* law of the proposed code, in four divisions, relating to persons, property, obligations, and general provisions, relating to the three divisions, all embraced in 3851 pages (including notes). It is proposed to embrace the *adjective* law of the proposed code in book 2, civil procedure. The major part of this is already in print, and 128 pages complete. All the completed work has been placed in the hands of the court for inspection, and suggestion as to changes, &c.

I also inclose account of Messrs. Morrison, for books and material necessary for the due prosecution of the work, amounting to .....	\$199 54
I am advised Mr. Howe has received on account from the District .....	600 00
I have received on account from the District .....	1,500 00
Total .....	\$2,299 54

The probable expense of printing I estimate at \$850. The appropriation for the work was \$5,000.

Very respectfully, &c.,

EDW. C. INGERSOLL.

Hon. A. G. RIDDLE,  
*Attorney of the District of Columbia:*

## I.—REPORT OF THE CORONER.

CORONER'S OFFICE, DISTRICT OF COLUMBIA,  
*Washington, D. C., October 9, 1879.*

GENTLEMEN: In compliance with your request of the 9th ultimo, I have the honor to transmit herewith a detailed statement of the operations of the coroner's office for the year ending June 30, 1879.

It will be seen that the total number of cases is largely in excess of former annual reports; this is in consequence of the abolishment of the office of medical sanitary inspector, attached to the late board of health.

During the last session of Congress, \$700 was appropriated for the contingent expenses of this office, in accordance with the recommendation that six persons constitute a legal jury, viz: Jurors, \$500; books, stationery, &c., \$200.

Although the appropriation passed, the number of jurors remained as before, thus leaving a deficiency of \$500, or, if witnesses are to be paid, the deficiency would be \$700.

The necessity for a morgue for the District continues to be more apparent and pressing. I respectfully invite your attention to former communications on this subject.

The following recommendations are submitted for the year ending June 30, 1881:

First, that six citizens of the District hereafter constitute a coroner's jury, and that they receive \$2 each for each case in which they are summoned.



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I submit the following estimate for the expenses of the office for the ensuing year:

Salary of coroner.....	\$2,000 00
Pay of jurors, on the above basis.....	500 00
Witnesses (if they are to be paid).....	200 00
Books, stationery, &c.....	200 00
	<hr/> 2,900 00

I have the honor to be, respectfully, your obedient servant,  
D. C. PATTERSON,  
Coroner.

Hon. COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

## APPENDIX I I.

*Tabular statement of deaths certified by the coroner during the year ending June 30, 1879.*

### Willful violence:

Suicide—	2
By gun-shot wounds.....	1
By incised wounds.....	1
By irritant poison.....	1
By narcotic poison.....	1
By jump from building.....	1
Homicide—	2
By gun-shot wounds.....	1
By incised wounds.....	2
By punctured wounds.....	1
By butting.....	1
By abortion, attempt at.....	3
By infanticide.....	26
By neglect at birth (unknown infants).....	

### Accidents and negligence:

Burns.....	4
Drowned.....	30
Fracture of neck, from fall.....	1
Fracture of skull, from fall.....	4
Gun-shot wounds.....	4
Kick of a horse.....	1
Neglect (known infants).....	3
Overlaid by mother.....	5
Ran over by railroad cars, &c.....	5
Still-births (known infants).....	45
Still-births (unknown infants).....	33
Suffocation by smoke.....	4
Sunstroke.....	1
Unbilical hemorrhage.....	4

### Diseases:

Anasarca.....	7
Apoplexy.....	12
Bronchitis capillary.....	8
Cancer of stomach.....	1
Cancer of womb.....	3
Cholera infantum.....	20
Colic.....	1
Congestive chill.....	5
Convulsions.....	8
Convulsions (infantile and trismus nascentium).....	75
Croup.....	9
Debility.....	1
Dentition.....	2
Diarrhea.....	21
Diphtheria.....	2
Dropsy of pericardium.....	3

# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA 121

## Diseases:

Dysentery.....	10
Embolism.....	2
Epilepsy.....	1
Fatty degeneration of heart.....	1
Hemorrhage of lungs.....	1
Hemorrhage of womb.....	1
Hydrocephalus.....	3
Hydrothorax.....	1
Inanition.....	16
Inflammation of bowels.....	1
Inflammation of stomach.....	1
Jaundice.....	1
Marasmus.....	22
Edema of lungs.....	1
Osteo-sarcoma.....	1
Paralysis.....	2
Pericarditis.....	3
Phthisis pulmonalis.....	44
Pleuritis.....	1
Pneumonia.....	63
Premature birth, debility from.....	40
Puerperal fever.....	1
Remittent fever.....	4
Senile debility.....	15
Spasm of glottis.....	1
Strangulated hernia.....	1
Syphilis.....	2
Trismoid.....	1
Typho-malarial fever.....	4
Valvular disease of heart.....	13
Total suicides.....	6
Total homicides.....	7
Total infanticides, &c.....	29
Total by accidents and negligence.....	147
Total by disease.....	436
Total of all cases certified by the coroner.....	625

	Total deaths.	White.		Colored.	
		Male.	Female.	Male.	Female.
Zymotic diseases.....	73	3	8	32	30
Constitutional diseases.....	85	6	8	27	44
Local diseases.....	206	19	17	101	69
Developmental diseases.....	72	11	13	26	22
Violence.....	111	33	11	43	24
Still-births.....	78	5	7	43	23
Total.....	625	77	64	272	212

Percentage of white deaths, 22.56.

Percentage of colored deaths, 77.44.

Of the whole number of deaths, 362, or 57.92 per cent., are under one year.

## Age:

Under 1 month.....	155
Between 1 month and 1 year.....	129
1 to 5 years.....	64
5 to 10 years.....	20
10 to 20 years.....	24
20 to 30 years.....	30
30 to 40 years.....	26

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40 to 50 years.....	15
50 to 60 years.....	28
60 to 70 years.....	21
70 to 80 years.....	16
80 to 90 years.....	14
90 to 100 years.....	3
Over 100 years.....	2

## Nativity:

District of Columbia.....	471
Other parts of the United States.....	131
Ireland.....	11
Germany.....	6
France.....	1
Canada.....	1
Unknown.....	4

## Social relation, above the age of 20 years.

Sex and color.	Widow or widower.	Married.	Single.	Total.
White, male.....	5	16	11	32
White, female.....	12	6	4	22
Colored, male.....	8	31	21	60
Colored, female.....	22	16	10	48

## Occupation.

Barkeeper.....	1	Merchant.....	1
Blacksmith.....	1	Messenger.....	1
Boatman.....	1	Nurse.....	1
Bricklayer.....	1	Plasterer.....	1
Burglar.....	1	Porter.....	1
Butcher.....	1	Roofer.....	1
Cabinet-maker.....	1	Sailmaker.....	1
Carpenter.....	4	Seaman.....	1
Claim-agent.....	1	Servant.....	17
Clerk.....	3	Shoemaker.....	3
Collector.....	1	Soldier.....	1
Dressmaker.....	2	Stone-mason.....	2
Dyer.....	1	Student.....	7
Express-driver.....	2	Tanner.....	1
Horse-doctor.....	1	Waiter.....	2
Housekeeper.....	14	Watchman.....	1
Laborer.....	51	Wheelwright.....	1
Laundress.....	1		

## Monthly mortality.

July.....	64
August.....	68
September.....	45
October.....	54
November.....	41
December.....	64
January.....	52
February.....	57
March.....	50
April.....	35
May.....	36
June.....	59

K.—REPORT OF THE HEALTH OFFICER.

OFFICERS OF THE HEALTH DEPARTMENT.

HEALTH OFFICER.

Smith Townshend, M. D.

CHIEF CLERK.

J. C. McGinn.

ASSISTANT CLERKS.

John N. Dickson.  
Will A. Short.

W. B. Jones.  
R. M. Barr.

A. J. Heird.

SANITARY INSPECTORS.

Samuel A. Robinson.  
James McV. Mackall, M. D.  
John P. Dennis.

Thomas M. Shepherd.  
Theo. Mead, M. D.  
C. C. Simms.

FOOD INSPECTORS.

George P. Bohrer.

Benjamin S. Elliott.

POUND MASTER.

Samuel Einstein.

MESSENGER.

Mason Coxton.

PHYSICIANS TO THE POOR.

J. W. Little, M. D.  
C. G. Stone, M. D.  
H. Suter, M. D.  
H. M. Newman, M. D.  
J. Walter, M. D.

W. L. Hudson, M. D.  
W. P. C. Hazen, M. D.  
A. E. Johnson, M. D.  
H. E. Leach, M. D.  
A. A. Marsteller, M. D.

B. M. Beall, M. D.

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## REPORT.

GENTLEMEN: The following report, which I have the honor to transmit for your consideration, embraces the transactions of the health department during the year ending June 30, 1879, its first year under my supervision. Although it fell to my lot a few short weeks after my appointment as health officer to compile and forward a report of the operations of this department of the government, that report, or a considerable portion thereof, was taken from data collated by my predecessors in office. The facts which I now record have grown to be such under my own observation, and the suggestions and recommendations made are based upon personal experience.

No attempt at extended essay upon any subject will be made; only a statement of facts, plain and straightforward as possible, is intended. I trust the work accomplished during the period named, and the general results attendant upon our labors, may prove satisfactory to yourselves and the people whom we serve.

The following brief synopsis will show at a glance the nature and amount of work performed:

There were 18,775 nuisances reported and abated; 24,036 pounds of meat, 2,810 bushels of fruit and vegetables, 36,765 pounds of fish, and 17,828 bushels of oysters condemned as unfit for food; examinations and reports made on 2,275 citizens' complaints; orders issued for burials at public expense in 620 cases; examinations made to ascertain local cause of disease in 187 cases; 1,854 official letters upon all subjects written; 2,103 official notices issued; 73 cases referred to the attorney for prosecution under our ordinances; 5,397 animals impounded; 6,415 dead animals, 6,463 tons of garbage, and 24,667 barrels of night soil removed from the District; 382 deaths referred to the coroner for investigation; 4,601 permits for burial issued, and the registry of births, marriages, and deaths, together with the issuance of weekly and monthly bulletins, conducted.

The accompanying tabular statement (Table A) shows, by months, the nature and number of nuisances which have been acted upon.

TABLE A.—Consolidated report of nuisances for the year ending June 30, 1879.

Nature of nuisance.	Months.												Total.
	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	
Alleys.....	31	119	40	20	33	28	3	24	26	38	61	30	453
Areas.....	2	5	1	5	12	4	4	4	53	5	26	2	56
Ashes.....	6	3	.....	.....	18	25	4	14	53	99	47	46	315
Cellars.....	3	56	21	15	9	8	8	.....	5	112	19	13	160
Drainage, defective.	6	114	48	49	81	48	31	40	89	77	82	60	725
Excavations.....	1	7	.....	1	1	.....	1	1	3	.....	.....	.....	15
Factories, soap.....	1	2	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Garbage.....	4	13	6	6	3	5	13	9	8	4	4	13	88
Gutters.....	11	31	47	30	24	3	.....	.....	4	1	15	12	178

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TABLE A.—Consolidated report of nuisances for the year ending June 30, 1879—Continued.

Nature of nuisance.	Months.												Total.
	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	
Hog-pens .....		25	3	5		5			1		8	2	49
Houses, filthy .....		14	4	2	4	18	8	14	17	24	26	15	146
Houses, unfit for habitation. 23	48	46	20	26	3	33	9	28	9	21	42	308	
Houses, slaughter .....		5	3			1	1					3	14
Houses, no privy .....		6	4	3	2	4	8	7	2	2	7	5	50
Hydrants .....		1	3	5	8	5			1	4	2	2	31
Lots, filthy .....	19	75	71	45	43	20	10	1	34	5	15	10	337
Lots, stagnant water. 19	41	37	13	11	5	1			3	22	26	10	188
Manure .....	7	14	15	5	11	3	3		9	7	25	8	107
Markets, public .....						1							2
Miscellaneous .....	34	44	33	40	78	74	57	42	84	65	85	124	760
Pumps .....		2	1	1								1	6
Pipes, water .....	1	6	2		10	2	2		1	1	4	2	31
Ponds .....									3	1		1	7
Privies, filthy .....	48	134	158	212	358	301	443	413	513	467	472	432	3,951
Privies, dilapidated .....	5	20	29	23	39	19	5	8	25	17	8	6	204
Privies, full .....	117	428	409	599	731	517	569	506	612	581	681	577	6,327
Privies, leaky boxes. 59	96	83	99	118	38	33	28	76	61	84	128	903	
Roofs, leaky .....	2	37	20	25	72	24	32	32	36	23	14	14	331
Sewers .....	9	33	17	9	17	12	23	15	11	25	28	13	212
Sewers, connection .....	7	63	36	52	21	15	3	10	51	10	32	17	317
Stables .....	12	24	10	5	11	11	9	5	11	10	28	5	141
Stables, cow .....	15	33	14	6	6	4		1	6	7	10	2	104
Streets, filthy .....	6	7	6	7		2				2	4	6	40
Streets, need repair .....	1	3	5	4					1		37	1	52
Traps, sewer .....	9	26	24	22	19	8	20	3	27	6	26	29	219
Yards .....	19	83	49	73	195	132	100	105	239	266	238	220	1,719
Yards, cow .....		6	3	7	1	1				4		1	23
Vaults, privy .....	2	4	11			1		2		1	2		23
Water-closets .....	7	16	5	5	9	9	15	10	15	25	10	23	149
Total .....	486	1,645	1,264	1,413	1,961	1,356	1,437	1,304	1,994	1,882	2,149	1,884	18,775

First upon this list come the

## ALLEYS.

In 453 cases have alleys been reported as nuisances. These, in a majority of instances, are the populated alleys in the more densely-settled portions of our cities. Some few among the unimproved are occasionally reported, but the great trouble is with the inhabited alleys. When an alley is properly paved, and bordered only with the out-buildings and stables of adjoining property, it is generally found clean, and can be kept in good condition by the weekly or semi-monthly visits of the sweepers, and the efforts of the inspector; but in the populated alleys it is different; drainage is generally effected by the placing of a sewer-trap, or drop, at the mouth or entrance, to which all wash-water, &c., is directed by a surface-drain having but slight fall. Into this drain all slops, wash-water, &c., must go, and into such waste material a considerable quantity of animal and vegetable matter is apt to find its way.

The license to deposit waste-water becomes an incentive to throw refuse, garbage, &c., and often, twenty-four hours after cleaning, we find these alleys again in a filthy condition. The drains become obstructed by small deposits, and the waste-water, &c., soon accumulates and becomes offensive. Now, if these alleys could have sewers extended their entire length, then we could compel connections to be made from prop-

instantly suppress several great packing houses in which half a million of money is invested. And so on to the end of a long chapter.\*

But to return to our question of defective drainage. We find many persons who stoutly oppose our efforts at securing proper drainage of their yards, and refuse to recognize any necessity for our insisting upon such being done. If there is no sewer with which easy connection can be had, they consider us transcending our duty if we order the construction of underground drains to convey surface and slop water to the most convenient paved conduit or out-of-the-way place of deposit.

"One of the first duties of the sanitary engineer when carrying out his works is to render the ground upon which any dwellings stand free from subsoil water within a recognized depth of their foundations. It is only by such means that the ground is made capable of supporting the incumbent outer air in such a state of purity (as indicated by the amount of carbonic acid it contains) that it shall always be available for the dilution of the air within dwellings.

"Perhaps the most fruitful source of impurity in the air in dwellings is the damp condition of the ground immediately beneath and adjacent to them, which often becomes saturated with liquid filth by the too-frequent practice of throwing the slops of dwellings upon the surface of yards or gardens, or, what produces nearly as bad a condition, by heaping upon it solid house-refuse of all sorts, to be washed into the soil by the rain-fall, and to give off effluvia from their accumulated heaps, or to spread their minute particles into the air to be taken into the lungs by respiration. It is when such a state of things exists that malaria may be said to surround the dwelling and render the outer air unfit for dilution of the inner air. The malaria which prevails in certain countries can hardly be dissimilar in some respects to the air which exists over 'excrement-sodden' ground and refuse-covered yards, though the effect may be worse in a hot than in a moderately cool climate like our own. In both, the absence of under-drainage is the primary cause of evil, and, in both, a soil aerated by under-drainage would, to a certain extent, oxidize the organic matters it contains and greatly prevent the generation of miasma. That this object is one of the most important which can engage the attention of the sanitary engineer cannot be denied, when it is shown, on the authority of Dr. De Chaumont, that long-continued exposure to bad air tends to the production of scrofula and consumption, of which latter disease it is, as already stated, probably the most efficient cause; that it promotes enteric fevers; that it fosters ailment of the respiratory organs, such as catarrh, bronchitis, and pneumonia; that it is frequently the cause of inflammation of the eyes, and that it adds to the spread of small-pox, scarlet fever, measles, and the like, while it renders the rapid cure of wounds and sores of all kinds a work of great difficulty."†

#### SOAP FACTORIES.

In my report of last year I called attention to the necessity for legislation covering the subject of soap-factories, rendering establishments, &c. That these pestilential nuisances should still be allowed to remain in the densely populated sections of our city—one within a stone's throw of the Patent and Post Offices, and another almost under the shadow of the President's house—is a stigma upon the capital city in this advanced

\* Report of O. W. Wright, A. M., M. D., Health Commissioner, Milwaukee, Wisconsin.

† Sanitary Engineering: J. Bailey Denton.



erty bordering thereon, and thereby avoid the nuisances which are now created by surface-drainage and soil saturation.

If the alleys can be kept dry, then keeping them clean becomes an easy matter. I would recommend, in all instances where it can be done, that the sewers be extended the entire length of the populated alleys.

#### DEFECTIVE DRAINAGE.

Many nuisances are created by defective drainage; the number of such coming to our notice during the year aggregated 725. Most of these cases arise in localities where the population has pushed beyond the sewers to where they must depend upon surface drainage for disposal of their waste-water, &c. In such cases it is often very difficult to obtain a satisfactory abatement of the nuisance, and complainants hasten to condemn the health officer for not performing impossibilities. I find there are many persons who think it perfectly natural and requisite that we should make water run up hill on their neighbors' premises or prevent it finding its level on their own. It is curious to observe the unreasonable obstinacy of some persons in complaining without cause, and the meek endurance of others in aggravated cases.

I find the experience of a brother health officer in this respect conveys a pretty accurate picture:

"The health office is necessarily the focus of complaints about nuisances. If any citizen considers himself aggrieved by his neighbor, on account of unpleasant smells or other sources of annoyance, he goes to the department which has charge of such matters. Mrs. Flanagan throws slops in the alley, and Mrs. Saurteig rushes to the commissioner of health and demands that her dirty neighbor shall be declared a nuisance. A studious clergyman is disturbed in his pious meditations by a stable in the rear of his library, and writes an elaborate epistle to the health officer demonstrating by logic and quotations from scripture that there is no hope of heaven for a man who keeps himself unclean on earth. A lawyer sends an indictment against his landlord for allowing a vault on his premises to become foul. A merchant complains that the odor of a hog-pen reaches his new mansion. A pauper brings a piece of tainted meat, supplied by the contractor for furnishing provisions to the poor, and asks for the protection of the proper officer. One is distressed with the sickening smell of a neighboring soap-factory. Another brings wormy flour purchased at a grocery. Mrs. Pickle comes to scold about Mrs. Fidget, who lets her hens run at large in the back yards of her neighbors. Doctor Teufelsdröck demands that the commissioner shall suppress a certain blacksmith who has the impudence to practice medicine. A gentleman with a scientific turn of mind has discovered the 'cadaver of a dead hen'—I quote his words—in the street, and lectures the department for permitting such things. A whole delegation of citizens complain that the alley in the rear of their lots is filled with garbage and mud. A meek man seeks redress against a neighbor whose foul vault stains through a thick wall into the very room where he sleeps in the basement of his house. A widow in weeds sobs while she narrates that her landlord lets stagnant water stand two feet deep in the cellar of the house where she lives. A patient laborer brings a cup of milk, alive with *bacteria*, from the 'dairy' of Herr Gotlos, who keeps his cows shut up in an unventilated stable and feeds them with nothing but 'still slops,' and wants to know if that is what makes his children sick. A Grand Avenue 'nob,' whose nose is still turned up in memory of 'odoriferous vapors,' demands that the commissioner of health shall

and advancing age of sanitary reform. The subject is fully covered in the health ordinances, but, unfortunately for the suffering citizens in the immediate vicinity of these nuisances, a decision of the supreme court of the District has rendered us virtually powerless to take further action without amendment to existing laws. This was urged last spring, but owing to the short session of Congress and press of other business, no action could be had.

I trust we may be more fortunate at the coming session, and that another year may find our community ridded of these noisome pest-houses.

#### GARBAGE.

By reference to the table it is found that 88 nuisances stand credited to the account of "garbage." These, however, do not include the complaints upon that fertile subject. Garbage, during the past year, has brought us much trouble and abundant correspondence. The contract was awarded in August, 1878, to John McCauley, who made a miserable failure in the attempt at its execution. It was found necessary to report him for neglect in the performance of his duties and failure to comply with the terms of his contract, whereupon it was turned over to Mr. H. Clay Jones. Under his management things went well for a while, but when the warm season, with its glut of vegetables and large increase of garbage, came on, complaints began to reach us in number, citing cases of neglect of the collector.

Investigation into these cases and a careful survey of the manner in which work was being conducted revealed the necessity for an increase in the force and its efficiency. The attention of the contractor was called to this fact, and additions to his force were made from time to time. Relief was thus obtained, but the service was not performed satisfactorily during the summer months. There seemed to be a lack of system and a disregard of appearance in the performance of the work, which will not be tolerated another year. The uniform wagons required by the contract were not supplied and barrels not kept tidy and well covered; there were evidences of carelessness in attention to citizens' complaints, and lack of energy in removing cause thereof. These things and others I hesitated to report, thinking that a little experience would enable the contractor to see and overcome defects and obstacles. In the future, however, I propose that the contractor for collection of garbage, whoever he is or may be, shall be held strictly to the letter of his contract, and any failure to comply therewith will be promptly reported. The removal of garbage during nine months of the year is comparatively an easy matter, but during the other three months hard work, constant watchfulness, and careful supervision are requisite to the satisfactory performance of the duty. The competition in attempting to secure this contract has, I think, resulted in its letting at a figure too low to enable the contractor to perform this work properly for the compensation, unless some profit comes from the utilization of the material. I think the garbage should be collected daily during the months of July, August, and September, and would recommend, if possible, that some such arrangement be effected. It shall be my earnest endeavor another year to prevent the recurrence of last summer's trouble.

#### HOUSES UNFIT FOR HUMAN HABITATION.

The condemnation of shanties and huts unfit for human habitation, which disfigure and disgrace certain sections of Washington, is a subject

which has received my earnest attention and in which some progress is being made. During the year 308 of these structures, found with leaky roofs, damp walls, defective drainage, no water supply, overcrowded, in many instances, with insufficient air space, and no ventilation, have been condemned, and either placed in good condition or removed. It is from these huts, which sprang up from the remains of old barracks and camps, that comes the alarming mortality among our negro population, as stated in my last report.

The District of Columbia has a large pauper element, brought to her by certain peculiar causes which have affected no other city. There are forty thousand negroes in the District, a majority of whom flocked to the seat of government just after the war, expecting to gain an easy livelihood and find perpetual employment at the hands of those who gave them freedom. But a reaction came, and with it came hard times, and these people found that freedom had its trials and tribulations as well as its joys and pleasures. Once imbued with a love of the excitement of city life, they were loth again to return to farm and field, and they have remained in the shanties and huts which fill the alleys and back streets of Washington and Georgetown. Poorly clad, ill-fed, and surrounded by filth and squalor, they fall an easy prey to disease, and are a constant care to the health authorities.

Many of these people are "squatters," in huts on what were ten years ago the city "commons," but now built up in many places with fine residences. Difficulty is sometimes experienced in getting them removed, but the advance, although slow, is a sure one. It is a source of congratulation to note the improvement which follows our footsteps in this work. Scores and scores of handsome buildings can be pointed out today standing upon the sites whence old hovels and rookeries have been removed by the exertion of the health authorities. The condemnation of these shanties always, in the end, redounds to the benefit of those who have occupied them. They find better quarters at a slight advance in rent, and soon become reconciled to the "tyranny" of the health officers. Dr. James B. Russell, of Glasgow, Scotland, gives some interesting facts upon the displacement of population by the condemnation and displacement of dwellings in that city. Five hundred and sixty houses were condemned, and 2,100 persons thereby forced to change location and find other habitations. These persons were mostly of the laboring classes, and in tracing the effect of the enforced changes he finds that 70 per cent. found houses equally near, if not nearer, to their work than before, at but a slight advance in rent. The old dwellings were the poorest in the market—poorest because of age, disrepair, and defect in the essentials of health and comfort; therefore the cheapest. There is nothing in this increase of rental imposed on these families which is not the every-day experience of people who abandon the use of the inferior, adulterated article for the superior, genuine. They have to pay more, but find it cheaper in the end. He finds that the change induced is not local, but general in its operations. When the reconstruction is completed, the people who occupy the new houses do not belong to the class displaced, but to the class above them, into whose cast-off houses the displaced class will go. Thus a general upward and outward movement is effected, affecting all classes ultimately.

#### LOTS.

Lots filthy and lots containing stagnant water, are two headings under which we find respectively 357 and 188 nuisances. A great many lots containing stagnant water were filled or drained last spring, and about the only nuisances of the kind now remaining are those on property for which no owners can be found, or those where the owners are non-resi-

dents and service of notices upon them cannot be obtained. Attention was invited last year to the necessity for obtaining legislation covering the subject of nuisances on property of non-residents. This necessity is felt more and more every year, and there are many persons who indignantly refuse to take this, our only plea, for not accomplishing the abatement of nuisances from which they suffer.

Filthy lots are numerous and, as a class, give us more trouble in securing their abatement than almost any other nuisances. Open lots are considered by the general public as designed to receive filth of all kinds when it becomes necessary that the same be removed from an inclosure. Owners, whom we are forced to hold responsible, when notified, become indignant and declare that the filth was put there by some one else and they know nothing about it; they "do not propose to clean up somebody else's dirt;" and then they inquire why we do not find out who committed the nuisance, and want to know "what the health department is good for anyhow." We are forced, for the sake of argument, to submit that the degree of usefulness of our department is very minute, but beg to ask if it would not be spreading half-a-dozen inspectors out rather than to make them cover the thousand and one open lots in the District, and watch the same night and day to ascertain who dumped their ashes and garbage and *débris* of all kinds thereon. Then their indignation rises one peg higher, and they want to know if we expect *them* to stand on their lots all the time and keep people off or find out who commits the nuisance. We disclaim any such desire, and venture the suggestion that an inclosure would prevent recurrence of the nuisance, whereupon they want to know why Jones on their right and Smith on their left are not also notified to inclose; theirs are just as bad, &c. At this juncture it is suggested, by way of reasoning, that two wrongs do not constitute one right, and that a good citizen should always set a good example when an opportunity is afforded. This is, of course, scouted, and they go off blessing "such a blasted government anyway."

#### MANURE AND ITS REMOVAL.

The removal of manure at certain seasons of the year becomes a question of no small importance, and the perfection of a system which shall satisfactorily solve the problem of its disposal in an inoffensive manner must, in my opinion, be an accompaniment to, or portion of, some comprehensive plan for the removal and utilization of all our offals. When this is accomplished, then we shall have made one long stride forward in sanitary reform.

Last spring we had considerable trouble in effecting the abatement of a serious nuisance caused by the accumulation of large deposits of manure on the open square south of N street south, and bordering the west bank of the James Creek Canal, in close proximity to the wall of the Washington Arsenal grounds. This section had become a place of general deposit for manure collected from all parts of the District by parties who shipped it twice a year to farmers down the Potomac. Heaping it up in large piles during the summer and winter, it was left to rot until the shipping season—spring and fall.

Of course large quantities of refuse of all kinds, in addition to stable manure, found its way to such dumping-ground and the result was a serious nuisance, complained of by all residents in the vicinity surrounding. A regular and thriving business was being conducted by the parties and they were loath to remove when so directed by this office. They resorted to various means to effect delays and made all sorts of prom-

ises, until finally the case was brought up in the police court and they were ordered by the court to comply with the health officer's instructions within a certain number of days. Thus the abatement of the nuisance was effected.

A manure-depot, however, situated at some point on our river front where it would not prove offensive, is, in my opinion, one of the sanitary necessities. So long as there is not some such place recognized and authorized by the authorities, minor nuisances will continue to be committed on the commons and open lots. There should be a regular depot for the disposal of all refuse material taken from yards, stables, &c., and all persons removing such material should be required to deliver same at this depot under penalty of fine. This would keep such materials out of the holes and excavations on open lots, and prevent the filling of land below grade with refuse destined to decay and at some future period prove injurious to the health of persons occupying dwellings erected on such ground. In connection with the subject of the removal of manure I would invite attention to the necessity for the erection of an

#### OFFAL DEPOT

at some point convenient to transportation routes by rail and water. One of the first steps necessary to a satisfactory performance of the work of removing offal is the erection of suitable buildings for receiving same, and the construction of all necessary appliances for cleaning and keeping these buildings free from offense. The present location of the depot for receipt and shipment of offal is unsatisfactory for several reasons. It is, in the first place, but a few old sheds erected by the contractor; it is in too close proximity to a thickly-populated section; it has none of the appliances necessary for keeping it in sanitary condition; and, lastly, dependence has to be placed upon tides in getting off the refuse, while there is no means whatever available for transportation by rail should navigation be closed at any time. I would recommend that an appropriation sufficient to cover the expense of erecting such buildings be asked of Congress, and that if possible the work be carried to completion during the coming year. The following table shows the amount of offal removed during the year:

Months.	Number of dead ani- mals.	Tons of gar- bage.	Barrels of night-soil.
1878.			
July.....	663	410	1,080
August.....	1,137	1,795	2,762
September.....	702	1,041	2,493
October.....	648	233½	2,243
November.....	487	280½	2,370
December.....	472	652	2,123
1879.			
January.....	440	340	1,566
February.....	343	169	1,029
March.....	420	239	1,536
April.....	212	294	1,698
May.....	438	517	3,420
June.....	453	502	2,397
Total.....	6,415	6,463	24,667

#### PUMPS AND PUMP-WATER.

An examination of the pump-water of our cities has been commenced, but I am unable at the present time to give any satisfactory report

thereon. As far as proceeded with, results have proven very satisfactory, much less organic matter being found than was contemplated. I hope I may be able in a future report to furnish some interesting facts relative to the well-water used by so many of our people, and trust that the facts recorded may tend to vindicate this much traduced beverage. I am a firm friend of the pumps, and would much prefer seeing measures taken to protect rather than condemn them. Pure shallow well-water is second only to pure spring-water, devoid of all metallic impurities, in point of wholesomeness for drinking purposes. All waters contain some organic matter; it is only those with an excess which are objected to, and more especially those containing animal organic matter which is especially subject to putrefactive change. The examination of drinking-water forms a very important portion of the duty of those who engage in a crusade against preventable disease. The health officer should be able to answer, in every case where a physician may desire to interrogate, as to the wholesomeness of a water. Many diseases have been traced to impure water as their source, and many may be in future warded off by having the people informed as to the exact character and constituents of the water which they use.

"The most rough and ready way that has been employed for ascertaining whether or not a water is polluted with organic matter is to partly fill a clean bottle with a sample of it, and then having violently shaken the same, to take a hearty sniff of the air of the bottle which has been agitated with the water. If the air smells sweet and fresh the absence of an injurious amount of organic matter is inferred and *vice versa*. It is very easy thus to distinguish between river and spring water; and a very impure water which may exhibit no fault to the eye, may frequently disclose to the olfactory nerves the fact of its pollution. If no smell is observed in this manner, some may be observed on gently warming the water; and if none then, the addition of a few grains of caustic potash may render it apparent."\*

#### PRIVIES.

It will be seen by reference to the table that in number "privies" far outstrip every other class of nuisances. This is explained by the fact that they are mostly used by the poorer classes who have constantly to be watched and notified to clean them when filled. The "privy-box" system in vogue in this city, while open to objection, is far superior to the old "vault" system, and to it I think is mainly due the good showing of our pump-water as compared with that of our sister city of Baltimore. The fecal matter here being received in close boxes above ground and removed regularly does not saturate the soil and pollute the water of our wells. If we could only impress upon those persons who are compelled to use privy boxes the efficacy of dry earth or ashes liberally supplied daily, after use, in rendering these receptacles free from offense, one great source of complaint would be removed. Dry earth or dry ashes can be easily obtained by all and if a box of this material is always kept at hand and regularly used in the privy it can be kept free from offense.

#### HOUSE-DRAINAGE, SEWER-GAS, DEFECTIVE PLUMBING.

If there is one subject which demands more than another the special attention of the health officers of cities at this time, that subject is house-drainage. It is hardly necessary for me to give here a scientific

\* Sanitary examinations water, air, and food: Fox.

essay upon sewer-gas, or to dwell at length upon the results which attend its escape into dwellings. The press has been doing such good work in this direction of late years that very few persons can claim entire ignorance regarding its deadly effect, and the necessity for providing against its intrusion. What remains for the sanitarian, however, is to warn an indolent public against resting in the fancied security of contrivances for the repulse of this arch enemy, which recent research and a better insight have proven to be worthless in the fulfillment of the purposes desired. A few years ago it was considered all sufficient upon constructing a water-closet in a house to place under the bowl a piece of bent pipe made to hold half an inch or so of water, which was to act as a barrier against all gas, no matter what the pressure under which it was held in the sewers. Numbers and numbers of water-closets erected after this manner were put in houses in this city, and some of them are doubtless still remaining, the occupants resting easy in the belief that their sewers are "trapped."

Improvements soon began to be made in the sewer-trap line, and all kinds of patented devices, many with more or less merit, *as traps*, were placed in the market. All the trap-makers seemed to be inspired with the single idea of holding back the gases, and it is only within a recent period that measures have been taken to afford a means of egress for this gas and ventilate as well as trap the sewers. I think it is safe to say that of the thousands of houses in the District of Columbia which have house sewer-connections, scarcely one hundred can be found which have any vent for these sewers outside the house rooms.

The water-carriage system for removal of excreta is certainly best, both as regards its healthfulness and economy. It is prompt, cleanly, and convenient, but its successful application depends solely and entirely upon attendant conditions, which demand constant, faithful, and scrupulous observance. Proper construction of house-sewers is the first thing to be observed; a uniform and abundant water supply, properly applied, is next demanded; trapping and thorough ventilation are the next requisites; and lastly, though not leastly, is the education of servants into the belief that sewers are not made for the disposal of *everything* in the refuse line.

Sanitary literature during the past two or three years has taken a much wider range, and progressive writers are correcting errors, going deeper into their subjects and furnishing the age comprehensive reports of their research.

The vague generalities which marked the language of our sanitary instructors a few years since is giving place to lucid argument and explicit direction. To tell us that such and such a thing must be "properly" done will no longer be tolerated. Progress has been rapid of late, and some of our prominent sanitary engineers have been frank to acknowledge their enlightenment and change of views.

Colonel Waring, one of the most eminent and experienced of American sanitary engineers, in an article in the July (1879) *Atlantic*, on "Recent modifications in sanitary drainage," says frankly that his articles written for the same magazine four years since are now quite out of date.

Just as much and more so is the drainage and plumbing of our houses erected a few years since. Reference to the table shows that during the year defects have been found in 317 house sewers. It is rare that an inspection of the drainage system of any house fails to reveal many and serious defects. In the city of Boston an examination of 718 dwellings in various parts of the city ascertained the fact that 337 had



defective drainage, 334 insufficient trapping; 208 were found to contain offensive odors, and not one of the total had vent of any kind for soil pipe, trap or drain. Now, I have no doubt that an examination of the same number of dwellings in Washington or Georgetown would reveal fully as bad if not a worse condition of our house-drainage systems.

It is remarkable, too, what little attention is paid by many physicians to the surroundings of their patients and to preventive medicine in general. Dr. T. Prigden Teale, of Leeds, England, issued recently what he terms a *Pictorial Guide to Sanitary Defects*, illustrating the common defects in house-plumbing. He says:

"Having discovered and rectified one by one numerous defects in my own house and in property under my charge, and having further traced illness of patients under my charge to scandalous carelessness and gross dishonesty in drain-work, I became indignantly alive to the fact that very few houses are safe to live in. Moreover, the conviction struck deeply into my mind that probably one-third, at least, of the incidental illness of the kingdom, including much of childbed illness, and some of the fatal results of surgical operations in hospitals and private houses (surgical calamities, Sir James Pagent would call them), are the direct result of drainage defects, and therefore *can* and *ought* to be prevented. Preventive medicine has long been proclaiming such facts and long have we turned a deaf ear, and we of the medical profession in general are only just beginning to see the great reality of her teachings.

"If any one challenges this assertion in reference to my own profession, I will reply by the inquiry: How many medical men can he tell me of, who understand the sanitary condition of their own house, or have adequately ascertained that those conditions are, so far as knowledge at present goes, free from dangers to health? If, by any possibility, it could be brought about that every medical man in the kingdom should realize the necessity of looking into the state of his own house, and act upon that conviction, I feel certain that the discovery would be made in so great a proportion of instances that they are living over pent-up pestilence, that we should at once have an army of sanitarians, earnest and keen, to ferret out unsuspected sources of illness."

The first step to be taken towards securing perfection in our systems of house drainage is to secure the passage of laws requiring that such work be done under competent official supervision, and in accordance with certain regulations. The necessity for such legislation is evidenced by the fact that action is being taken in nearly every principal city in the country to secure the enactment of laws and ordinances governing the subject. The attention of Congress was called to the matter last winter, and the following bill passed the House of Representatives.

"*Be it enacted, &c.,* That there shall be appointed by the Commissioners of the District of Columbia, on recommendation of the health officer, an inspector of plumbing for said District, whose duty it shall be, under direction of the health officer, to inspect all houses in course of erection, and pass upon the plumbing and sewerage of said houses, and the health officer of the District of Columbia is hereby authorized, under direction of the Commissioners, to execute and enforce regulations governing plumbing, house-drainage, and the ventilation of house-sewers, and any person who shall neglect or refuse to comply with the requirements of said regulations, when promulgated, shall be punishable by a fine of from twenty-five to two hundred dollars for each and every such offense, or in default of payment of fine to imprisonment for thirty days."

There is no class of work attendant upon the building of a structure



intended for use as a human habitation which needs such careful supervision in the interest of the health and lives of those who may occupy it afterwards as does the work of the plumber.

"No fact rests upon a broader and more substantial basis of truth than that the gaseous emanations from decomposing sewage, commonly called sewer-gas, are a fruitful source of disease.

"Whatever the agency by which it works, we know that it comes with the power and potency of death; escaping into the free atmosphere, its deadly power is quickly destroyed by the oxidation of its organic poisons; but when it mingles with the confined air of our unventilated living and sleeping-rooms it retains its deadly power long enough to do its work effectually.

"Dr. Mapother, of Dublin, an eminent authority, states that there occur annually in England 140,000 cases of typhoid fever, of which 20,000 terminate fatally, which are clearly traceable to defective drainage and sewer-gas poisoning; and yet typhoid fever is only one of a long list of prevalent zymotic diseases.

"If we look for the cause of the large mortality from zymotic diseases in our cities, we find it principally in sewer-gas poisoning. Other causes operate to swell the total, but to bad plumbing work we may attribute the prevalence of pythogenic pneumonia, peritonitis, inflammatory rheumatism, typhoid and malarial fevers, croup, diphtheria, and many kindred diseases, which are almost epidemic in all our large cities.

"Unfortunately for the progress of sanitary reform, the difference between good and bad plumbing is usually so slight as to escape the notice of any but a trained expert, but it is commonly great enough to exert an active and far-reaching power for mischief."\*

Let us follow the intelligent sanitary inspector in an examination of the pipe systems of an average New York (or Washington) house of the better class: "In the drainage system and its appurtenances we see dependence for the suppression of gases, often held under considerable pressure in the sewers, placed upon suppositious half-inch water seals in traps of such shape and so placed that they are likely to be emptied every hour in the day and stand empty during the night. We find that the foul sewer is provided with breathing-holes into our houses; that in dark, unventilated recesses adjoining our bedrooms are cheap and flimsy water-closets, wrong in principle and wholly unsatisfactory in operation, retaining so much of the filth passing into them that they become pestilential nuisances. In short, we find every condition so favorable to sewer-gas poisoning that we no longer wonder at the great mortality from diseases of pythogenic origin. As the plumbing work of our houses is commonly done, it would be better for most of us if we had to bring our water in buckets from a public hydrant and carry our waste to the culvert at the nearest street corner."

The plumbers' work is covered by the builder and at once hidden from sight. In a few months, sometimes weeks, the occupant of the house complains of an obstructed sewer, a leak in the soil-pipe, a troublesome odor that cannot be accounted for, or some other of the numerous evils that follow in the wake of "scamped" plumbing.

The inspector investigates and finds a pipe of insufficient size, the joints put together with common mortar instead of cement, improperly laid, so that joints have opened; a pipe, perhaps, broken in the laying and left with an opening for escape of gases; no trap, perhaps, under sink or closet, or the bath-tub connected with the soil-pipe below the trap.

\* House Drainage and Water Service: Bayliss.

The finding of defects in the private sewers of our houses is of everyday occurrence.

If the daily report of one of our inspectors is without such a case it is an exception. And this will continue so long as some law is not placed upon the statute-books making a misdemeanor of the reckless criminality which characterizes our plumbing work. I can earnestly say with a former health officer of this District—

"That such a law does not stand prominent upon the pages of the code of every city is a disgraceful reproach upon the intelligence and civilization of this present age. We would bring to speedy punishment the druggist who carelessly dispenses poison, or the grocer who fraudulently sells deleterious compounds, but permit a plumber, and pay him well, to open a direct communication between our chambers and the general receptacle of the foul drainage of our city, trusting to his honor for protection, and he goes unpunished for his fraudulent practices, while we ignorantly allow the health, life perhaps, of our family to be sacrificed by his neglect."\*

Under this bill, if passed, an inspector would be appointed, whose duty it would be to see that every house erected in future should have the plumbing work done under certain wholesome regulations, regulations which would require the use of proper material, proper construction, adequate ventilation of sewers, and the employment of all proper means for the prevention of the return of poisonous gases from sewers into dwellings.

Is it not eminently necessary that the people have such protection? Is it not as necessary that a drain-pipe of proper size and thickness be put in as it is that the house should have a wall of certain thickness? Is it not as just that you should protect the people by having the safeguard of proper traps to shut out this deadly gas as it is that you should require them to build houses of certain material to protect them against the danger of fire? In short, if you make regulations to protect them against an open avowed enemy, is there not double necessity for barricading against one who lurks in the dark and strikes where we least expect.

The Plumber and Sanitary Engineer, a monthly journal published in the city of New York, and the best paper of its class in existence, in an editorial on this subject, says:

"The only practical and permanent remedy for this difficulty is to prevent bad work by having it inspected by a competent person. The authorities should allow no house to be occupied unless thus inspected. Where defective work is afterwards found, they should cancel the license of the plumber who did it; if he persists in such evil practices, then send him to the penitentiary, to learn the error of his ways. Certainly the evil is of sufficient magnitude, and prevention is both easier and better than cure."

Public attention has been largely drawn to this subject of late and expressions in favor of an official inspection of plumbing come from influential journals and experienced sanitarians on all sides. The common council of Baltimore has passed an ordinance covering this subject; Cincinnati and Chicago are agitating the question. The New York Journeymen Plumbers' Society propose petitioning the legislature for the appointment of such an inspector, and other cities are moving in the same direction.

There has been some question as to the best method of payment of

\* Dr. P. T. Keene: 4th Annual Rept. B. of H. D. C.

such an officer, but in my opinion there should no hesitancy between the fee and the salary plans. The public is apt to look with disfavor, not to say suspicion, upon the fee officer, and then again there is an opportunity for overofficiousness. He should not be dependent upon any uncertainty for his living, and should be fearless in the discharge of his whole duty.

"An effort was made to amend the bill so that the inspector should be paid by fees collected from persons whose houses were inspected, but we are glad to say it was voted down, and provision will have to be made for payment by a salary. It is very undesirable that any public officer should be tempted to increase his labors in order to multiply his fees. The immediate effect of the fee-system would be to make the public suspicious of his disinterestedness.

"An official inspector of plumbing should be a man of capacity and of the strictest integrity, fearless in the discharge of his duty, and not dependent for his living upon an uncertainty.

"The majority of householders and builders would undoubtedly avoid utilizing his services if they thought they could thereby escape paying a fee. But if the cost of the service was paid out of the public money, no reasonable objection could be made to it.

"On the other hand, if an unscrupulous man received the appointment under the fee-system, he would very naturally be regarded as a "striker," and would prove to be only a burden upon the community. The service to be performed by an official inspector of plumbing is too important to allow any one to abuse the position, and we fear the fee-system would surely lead to such a result.\*

The object to be sought in house-drainage is the provision of a permanent drainage-channel for the removal of all wastes offering little asperity for the adhesion of foul matter, swept from end to end by fresh air, absolutely separated by mechanical obstructions from the interior atmosphere of the house, and literally a section of out-doors brought for convenience within the walls of the house, open to receive the contents of the various waste-pipes brought to it, but securely closed against the return of its air. I believe that the next step in advance will be the establishment of means by which the whole length of the drainage-channel may be thoroughly flushed with clean water at least once in twenty-four hours.†

I will close this subject with the following :

#### REQUIREMENTS FOR THE DRAINAGE OF EVERY HOUSE.‡

"In the light of present knowledge, the following seems to us the essential requirements for the drainage of every house. Time and further experience may suggest other features or modifications of these. We invite our readers to criticise or ask for more detailed explanation of any section not fully understood or concurred in.

"Every house-drain should have an inlet for fresh air entering at a point inside the main trap, and carried to a convenient location *out of doors*, not too near windows.§

\* Plumber and Sanitary Engineer.

† Colonel Waring's paper in July Atlantic.

‡ Plumber and Sanitary Engineer, September 1, 1879.

§ This pipe will relieve the smaller house-traps from pressure occasioned by a descending column of water that would otherwise be likely to force the seals of these traps. The air drawn through this inlet to the lower part of the drainage system assists the circulation within the drains, and is essential to insure the diffusion of the gases generated within them.

"A trap should be placed on every main drain to disconnect the house from the sewer or cesspool. In places liable to unusual pressure from the sewer it should be a double trap, with vent from between the two traps, running up full size above the roof; or, where the pressure from sewer is only occasional and the rigor of climate will permit, this vent may be carried to the sidewalk or area, at a safe distance from windows. If the first trap is forced, the gas can gain easier exit through this pipe than through the second trap.

"Every vertical soil or waste pipe should be extended at least full size through the roof.

"No traps should be placed at the foot of vertical soil-pipes to impede circulation.

"Traps should be placed under all sinks, basins, baths, wash-trays, water-closets, &c., and as near to these fixtures as practicable.

"All traps under fixtures, wherever practicable, should be separately ventilated, in order to guard against siphonage. Such vent-pipes should not branch into a soil-pipe below where any drainage entered it. In some cases it is preferable to carry it to outer air independently.\*

"Rain-water leaders should not be used as soil-pipes, and, when connected with house-drains, they should be made of cast iron in preference to galvanized sheet-iron or tin, there being less liability of corrosion. Joints should be gas and water tight, to preclude possibility of drain-air entering open windows.

"No safe-waste should connect with any drain, but it should be carried down independently to a point where its discharge would indicate the existence of a leak or any overflow above.

"No waste from a refrigerator should be connected with a drain.

"Unless the water supply is ample, so that it will rise to every part of a building, insuring at all times the proper flushing of fixtures and traps, a cistern should be provided into which the water will rise at night or into which it may be pumped. Said cistern should be large enough to hold an ample daily supply, be kept clean, covered, and properly ventilated. The overflow-pipe from it should *never* be run into any drain *under any circumstances*. The supply for drinking-water should not be drawn from it, but from a direct supply, *i. e.*, direct from the street main.

"Water-closets should not be supplied directly from street pressure or by a pipe from which branches are taken for drinking-water. Where the valve-closets are preferred to those that are supplied from a small cistern immediately over them, then the supply should be taken to a storage-tank, from which it can be conveyed to the valves on the closets, thereby insuring an equable pressure and securing more reliability in their working.

"All drain-pipes within a house should be of metal in preference to stoneware, owing to the liability of the latter to crack and the difficulty of keeping the joints tight. It is best to run them along the cellar-wall or ceiling, with a good incline. They should never be hidden underground, as then leaks will not be perceptible. In some places it is common to paint pipes white, so that any leakage will show itself to the most careless observer.

"All drains should be kept at all times free from deposit, and if this cannot be effected without flushing, special flushing arrangements

\* The extension of soil-pipe, full size, through the roof is not a certain protection against siphonage of traps branching into it, and no protection when traps are on a horizontal pipe a distance from the vertical soil-pipe.

should be provided, so as to effectually remove all foul matter from the house-drains to the public sewers.

"All drains should be laid in a straight line, with proper falls, and should be carefully jointed and made water-tight. No right-angled junction should be allowed, except in the case of a drain discharging into a vertical shaft.

"No drain should be constructed so as to pass under a dwelling-house, except where absolutely necessary; and then it should be constructed of cast-iron pipes, with lead-calked joints laid so as to be readily accessible for inspection, and ventilated at each end.

"Whenever dampness of site exists, it should be remedied by laying subsoil drains, which should not pass directly to the sewer, but should have a suitable break or disconnection.

"Water-supply and drain pipes should be concentrated as much as possible, and not scattered about a building. Horizontal pipes are objectionable.

"Plumbing fixtures should not be hidden behind walls and partitions; where their condition is never apparent. They ought properly to be open to view, and so situated that any leak would be readily detected. It is also well to have a plan of the plumbing of each house for the tenant's or owner's convenience and guidance in any emergency.

"In planning house-drains, they should be got outside the walls of the house as quickly as possible, so that there may be few joints of pipe and the smallest chance of leakage from defects or accidents, taking proper precautions in locating to guard against freezing."

#### SEWER-TRAPS.

Two hundred and nineteen sewer-traps were reported during the year as having become nuisances. These were mainly the drops or catch-basins at street corners or the mouth of alleys, which become filled with refuse, street washings, &c., material which, containing more or less vegetable matter, soon decomposes and becomes offensive.

In this connection I would repeat the words of my letter of March 27, 1879, urging the necessity for providing some less offensive means for cleaning sewer-traps:

"The present mode is very defective and has always been objectionable. The contents of these traps or "drops" is always offensive in the extreme, especially those situated at the mouth of the populated alleys; animal and vegetable matter of all kinds finds its way into them, and not unfrequently fecal matter is found as a component of the reeking mass removed. The material is taken up by means of buckets and shovels, dumped on the surface, thence transferred to open carts, and drawn through our streets to the place of final deposit, free to disseminate its effluvia on the route. It is one of the few remaining relics of a bygone age in Washington, and should not be longer tolerated. These traps are in many instances situated under the windows of our best residences, and the occupants have come to look with abhorrence upon each return of the period for cleaning. There is no reason, I think, why they should not be cleaned in as inoffensive manner as our privy vaults, and I earnestly hope that the serious nuisance which must follow their cleaning by the present system may be obviated by the introduction of more approved means ere the approach of another warm season."

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TABLE C.—Unwholesome food condemned during the year ending June 30, 1879.

Description.	Months.												Total.
	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	
Beef .....lbs.	1,523	2,103	1,234	398	177	149	56	31	223	376	3,982	2,113	12,365
Veal .....do.	40	196	189	53	776	1,165	1,294	1,328	518	2,099	876	172	8,706
Mutton .....do.	8	109	137	.....	157	70	.....	650	3,464	259	254	330	5,438
Bacon, ham, and pork .....lbs.	371	423	148	340	1,384	1,975	54	54	179	365	157	140	5,599
Birds, rabbits, and squirrels .....No.	.....	.....	56	10	309	.....	72	12	.....	.....	.....	.....	459
Poultry .....lbs.	.....	.....	75	.....	867	389	100	97	313	87	.....	.....	1,928
Eggs .....doz.	105	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	.....	118
Potatoes .....bush.	.....	.....	.....	.....	68½	132½	61½	13½	11½	8½	14½	6	316½
Beans, pease, and onions .....bush.	1	.....	.....	.....	6½	½	1½	.....	.....	.....	29½	131½	170½
Beets, radishes, and asparagus, bunches.....	15	8	.....	.....	20	10	40	.....	.....	.....	611	51	755
Cabbage and lettuce .....heads.....	.....	312	612	170	381	240	622	343	320	543	707	1,223	5,473
Squashes and pumpkins .....No.	.....	.....	.....	67	167	184	114	21	.....	.....	.....	79	632
Corn .....doz.	.....	85½	675	308	51	.....	.....	.....	.....	.....	.....	.....	1,119½
Cucumbers .....doz.	27½	28	221	98½	.....	.....	.....	.....	.....	.....	37½	402	814½
Egg-plants .....No.	56	284	837	440	123	.....	.....	.....	.....	.....	.....	.....	1,740
Potatoes and turnips .....bush.	.....	7½	.....	13½	24	18½	14½	3½	9½	½	2½	.....	92½
Kale .....bbls.	.....	.....	.....	.....	.....	.....	.....	.....	1	26	27	.....	54
Apples .....bush.	.....	.....	.....	.....	4	6½	9½	13½	13½	4½	12½	.....	63½
Watermelons.....	778	3,073	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,455
Caulsteups.....	1,526	3,954	594	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,074
Miscellaneous fruits and vegetables .....bush.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cheese .....lbs	22	99	36½	32½	36½	50	47½	102	115	170½	114	.....	826½
	.....	327	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	327

## THE INSPECTION OF FOOD.

This service is considered by many to rank as first in importance among the duties of the health officer. Upon the wholesomeness of those three great necessities of life, meat, flour, and vegetables, the public health to a great extent depends, and the health authorities of a city should be so armed with authority and means as to be able to render impossible, the sale for food of any diseased or unsound meat, impure flour, or unripe, overripe, or decomposing vegetables. The present method of inspecting meats only after being brought upon the market stalls is not satisfactory. There is urgent necessity for the establishment of abattoirs and the execution and enforcement of rules and regulations governing the inspection and slaughter of animals intended for food. Aside from the question of abating the nuisances now created by slaughter-houses, the

## INSPECTION OF LIVE STOCK

previous to their slaughter is necessary as the first step toward perfecting the system in the prevention of the sale of unwholesome food. Until we can control the great sources of supply and absolutely prevent unsound meats reaching our markets the service will not accomplish the results desired.

Mr. John Gamgee, in a report of examinations made at the request of the English Government, expresses the belief that as much as one-fifth

of the common meat of the country, beef, veal, mutton, lamb, and pork, comes from animals which are considerably diseased. The following is a digest of his examinations:

"Horned cattle affected with pleuro-pneumonia are, much oftener than not, slaughtered on account of the disease, and when slaughtered are commonly (except their lungs) eaten, and this even though the lung disease has made such progress as notably to taint the carcass; that animals affected with foot and mouth disease are not often slaughtered on account of it, but if slaughtered are uniformly eaten; that animals affected with anthracic and anthracoid diseases, especially swine and horned cattle, are (except their gangrenous parts) very extensively eaten; that the presence of parasites in the flesh of an animal never influences the owner against selling it for food; that carcasses too obviously ill-conditioned for exposure in the butcher-shop, are abundantly sent to the sausage-makers, or sometimes pickled and dried; that specially diseased organs will often, perhaps commonly, be thrown aside, but that some sausage-makers will utilize the most diseased organs which can be furnished them; that the principal alternative on a large scale to the above-described human consumption of diseased carcasses is that, in connection with some slaughtering establishments, swine (destined themselves presently to become human food) are habitually fed on the offal and scavage of the shambles, and devour, often raw and with other abominable filth, such diseased organs as are below the sausage-makers' standard of usefulness."\*

Perhaps, taken as a rule, this statement would not prove true of the average slaughtering establishment in this District, but there are practices cited (notably the latter two) which would apply to some of our slaughter-houses. At any rate the opportunity is afforded for such practices if persons are so disposed, and this temptation should be removed.

Our flour is happily pure, breadstuff not having as yet reached a figure in this country which would tempt the adulterator. The public is pretty well protected as regards vegetables also, as the large amount of condemnations shown in the foregoing table will testify. Adulteration obtains largely among the shelf goods of our grocery stores, however, and it is a subject which must sooner or later demand action.

"That teas are faced, to give them bloom, with ferro-cyanide of iron, considered by the majority of physicians to be deleterious to health; that ales are salted to make customers more thirsty; that nearly every sherry is plastered; that fusel-oil is a frequent accompaniment to raw spirits; that sugar often contains iron and sand; that preserved vegetables are frequently colored with copper; that lemonades, beer, and porter not uncommonly contain lead; that tea is weighted with iron, and weakened with the leaves of the thorn and other plants; that butter is sometimes made without cream; that coffee is adulterated with rotted figs, which have been roasted and ground to powder; that ports are manufactured at chemical works, are all facts which are now pretty well known to the public, who have the remedy in their own hands."

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\* Sanitary examinations of water and food: Fox.

TABLE D.—*Inspections and condemnations of marine products for the year ending June 30, 1979.*

[illegible]



## MARINE PRODUCTS—THE POTOMAC FISHERIES.

The subject of marine products when taken beyond our markets, and the protection of the Potomac fisheries in general, can hardly be said to be one coming exactly under the health department; yet it is one which must come home to every citizen of our District; and as I find myself the only official who comes directly in contact with the service, I propose to point out a few facts in regard thereto, and then suggest a plan by which I think a remedy, in part at least, for a growing evil can be obtained.

Seventy years ago it is said that fish were so numerous in the Potomac River as to interfere to a certain extent with navigation.

This statement I am not prepared to vouch for or substantiate; but it is certain that fifty years ago the supply was so very far in advance of the demand that enormous quantities of shad and herring were every year banked upon the fishing shores, and used as fertilizers for land in the vicinity. We need not go to the oldest inhabitant to be told of 100,000 to 150,000 herring, and 20,000 to 40,000 shad, being caught *at a single haul* at many of our fisheries. You can hear these statements any day from men, yet in the prime of life, who have done the catching in many such instances, and who now speak of them with a sorrowful shake of the head which means, "Those days are past and gone, never to come again."

Gradually, year by year, have the fisheries declined, until now not one person who follows the business of fishing with any degree of success can be found. The fishermen have been hoping against hope for years, until they have finally accepted the conclusion of Othello, that their occupation's gone.

A large majority of the fishing shores on the Potomac that, twenty years ago, were dotted with the cabins of the fishermen, and from whence flashed out nightly during the fishing season the glow and glare of numerous fires and lights, giving to the river shores the appearance of one continuous camp or array of small villages, have now become as a wilderness; the undergrowth has enveloped the windlass that once went round to the merry tune of the fisherman's song, and the cabins have fallen, log from log and stone from stone, into a heap of ruins.

It is the fisherman himself who is to blame, however, and now it becomes necessary that the strong arm of the law step in and protect him from himself.

As an illustration of the rapid decline of these fisheries which furnish food to so many of our people, I will cite the history of one shore, going back but ten years.

The "Stony Point" shore is situated about twenty-five miles from Washington, on the Virginia side, and has been considered one of the finest fishing shores on the Potomac. In 1868 the shad and herring caught at this shore during the season sold for \$30,203.92. In 1878, with fish bringing higher prices, they sold for \$6,092.48, a falling off of \$24,111.44 in its earnings. The first days in May are usually considered about the best in the season for fishing. On the 1st and 2d days of May, 1868, there were caught at the "Stony Point" shore 24,082 shad and 63,627 herring. On the corresponding days in 1878 there were but 1,393 shad and 13,692 herring caught. On the days named in 1868 the receipts from sales of these fish aggregated \$2,268.85, with shad selling at from \$6 to \$10 per hundred and herring at from \$7 to \$8.50 per thousand. In 1878 the sales aggregated \$346.38, with shad selling at from \$14 to \$20, and herring from \$6 to \$8. And this is the history of all the

fishing-shores on our river. In 1868 one firm rented three shores, paying for the three an annual rental of \$6,150. In 1878 two of these shores remained idle, not being considered as worth an outfit, while the third rented for \$500.

Now, this fearful decrease in our finest food fish and corresponding decrease in the valuation of property along the Potomac is mainly due to overfishing; to prolonged and continuous fishing, fishing in season and out of season, day and night without interim. Of late years fishermen seem to have increased as rapidly as the fish have decreased, until the river-bed has become itself but a network of nets. It is almost an impossibility for the shad and herring to reach their spawning-grounds, and it has been truly said that no water reaches the bay without passing through the meshes of many nets. There are three styles of net used in fishing here—the large “seine,” which is hauled by man, horse, or steam power, the “pound” net, which remains stationary, fishing only in shallow water or outside the channel, and the “gill-net,” which fishes anywhere, everywhere, and all the time. These “gill-nets” have multiplied largely of late years and fairly interlace each other from the Long Bridge to Wicomico Bay. The large seines usually “cut out” about the 20th to the 25th of May, but the gill-nets continue on throughout the months of June, July, and, in fact, the entire year, fishing in the channel and out of it sunk; to any desired depth, they catch fish on their migrations in the deepest or most shallow water.

It is the continuous fishing of the hundreds of these nets which infest the Potomac that results in the great decrease, and which, if not prevented soon, will entirely eradicate shad and herring from its waters. During the month of June, 1879, there were 20,499 shad brought to our wharves, and of this number, fully one-half were “roe” or female shad—“producers.” Now, if fishing had been discontinued at the end of the season, June 1, these 20,000 shad would have remained in the river, and the 10,000 females would have deposited their spawn. Just ponder then for a moment upon the number of fish which have been destroyed by removing these 10,000. Some persons estimate the number of eggs in a “roe” shad at hundreds of thousands, and even millions; but suppose we place it at the modest estimate of 10,000, and it is found that 100,000,000 have been taken from the river after the 1st of June by this pernicious custom of overfishing. If these 100,000,000 eggs could have been deposited in the river, and even one-half the number hatched, a stock of 50,000,000 shad, or enough to supply our markets fully for five years, would have been the result.

And, indeed, there is a question of the fitness for food of these fish taken from the waters when almost in the very act of spawning. We would not tolerate for a moment the flesh of an animal butchered when in the advanced stages of pregnancy, yet persons are found daily buying shad from our markets with the spawn so far matured as to be oozing from them.

The season for shad and herring virtually ends on May 31, and I think the sale of these fish should be prohibited after that date. To be sure, it would be much better could we prohibit their being caught, but legislation relating to the Potomac is involved in great difficulty, owing to its being the dividing line between the States of Maryland and Virginia, and an old compact antedating even the articles of confederation, which provides that any legislation affecting the Potomac shall be confirmed by both States before it shall be valid.

A bill was introduced in the legislature of Maryland in 1876 which

effectually covered this subject, and which would have been of great value if passed, but for some reason nothing came of it.

There is one step the District of Columbia can take, and this, if taken, might in its agitation point out more fully to our ancestors, the States of Maryland and Virginia, the necessity for uniting upon some line of action looking to the protection of the Potomac fisheries. We can petition Congress to enact a law prohibiting the sale of shad and herring in the District after May 31 in any year, and, after the manner of our game laws, make it a penalty to expose for sale or have in possession any such fish after the period named.

I would recommend that action be taken to secure such legislation at the coming session of Congress.

The system pursued in the inspection of marine products is well-nigh perfect, and the results accomplished are most satisfactory. Here we have the source of supply under supervision, and fish, oysters, &c., must be in wholesome condition, else they are not allowed to go upon the market. The opportunity of buying poor stuff is not afforded mercenary dealers, and, therefore, they cannot prey upon the lives of the poorer classes in selling them unsound fish.

Reference to the foregoing table (Table C) will show the inspections and condemnations for the year. It explains itself, and is an interesting exhibit of the work accomplished.

#### SANITARY IMPROVEMENTS IN PUBLIC SCHOOLS.

It affords me much pleasure to state that my inspection and report upon the public schools has resulted in some improvement for the better in several of the buildings. In this report, made a year since, I promised, and had hoped to have been able, to give the subject that more careful and considerate attention which its importance demands. The opportunity has not yet been afforded, but I trust that before the schools are closed for another season I may be enabled to make such examinations as will be of benefit in still further improving their sanitary condition.

I find upon recent examination that attention has been paid to our warning, and many of the defects pointed out have been remedied. At the Curtis building, Georgetown, the method of obtaining air has been improved, the offensive water-closets have been removed and closet floor concreted. At the Sumner building, improvements have been made in the heating and ventilation, but the offensive defective "Hopper" closets remain; these should be replaced by flood-troughs at once, as they are entirely unsuitable for the use of children. At the Franklin building, improvements have been made in the methods of heating and ventilation, and new water-closets have been put in. The water-closets at the Seaton building have been removed from the basement into yard, and the sanitary condition of the building thereby benefited. Ventilation of the rooms on the ground floor of the Cook building has been improved.

Improvement in the drainage of the Abbott building is also noted, and the surroundings of the Bowen school have been improved. The school-building corner Fourth and L streets northwest has been ventilated, and the dampness removed by taking up the floor and relaying it upon a solid concrete foundation. The basement of building at corner E and New Jersey avenue has been concreted. The water-closets at the Berret building have been improved. Building corner Nineteenth and H streets northwest has been much improved, and many of the smaller

schools repaired, cleaned up, and generally bettered in condition. Of course much remains to be accomplished, and many of the smaller school rooms have had no action whatever taken toward their improvement, yet still it is a cause of congratulation to know that some good has resulted from our efforts in this direction, and the reflection will inspire us to continue our work with increased fervor. The subject of ventilation of city school rooms is being widely agitated at the present time, and I trust this agitation may result in advantage to the rising generation.

It would seem that the last quarter of the nineteenth century was a somewhat late date at which to urge the necessity of pure air in school rooms, for the ancient dictum that "the breath is the life of man" is a truth that no one has ever thought to doubt. The known sensitiveness of children to all physical influences, the increased demand which the brain in special action, as it is during study hours, makes upon the heart for blood, and the consequent requirement of the blood upon the lungs for air to purify it, are supposed to be matters of general knowledge. In practice, however, all these facts are ignored by men who construct school buildings and those who control them. A room as large as a family sitting-room, in which half a dozen people cannot sit for three hours without drowsiness, headache, nausea, feverish heads, or all of these discomforts in succession, is supposed to be good enough for occupancy for the same length of time by twenty, thirty, forty, fifty, and even seventy-five children, and during the very hours when the brain is called upon for the principal work of the day. If such a room had doors and windows so placed that currents of air could visit every portion of the apartment, the air would not even then be as good as the human system demands; but even such facilities for ventilation do not exist in city school-rooms, where the size and shape of the building, and the arrangement of its rooms, are regulated by the location of the ground upon which the building is placed.

The consequence is that the air of almost any school room in a city will be found, during school hours in the cooler season, to be oppressive to the lungs of the visitor and offensive to the nostrils. A window may be slightly down at the top, but unless a door is also opened there is no circulation of air, while a draft direct from door to window is sure to chill the pupils in its path without particularly benefiting those in other portions of the room. In the walls of some rooms are flues, which are supposed to conduct the impure air upwards, on the principal that warm air, being lighter than the outer air, is bound to rise; but as warm air cannot rise unless other air can come from somewhere to take its place, and as carbonic-acid gas, which is plentifully thrown out with exhausted breath, is heavier than any air, and will not rise at all unless by suction or force, these flues are of but little good.

These being the facts—and we would be ashamed to quote information so simple were it not that it has successfully escaped architects, school officers, and teachers—certain physical results inevitably follow. Nearly every school room in the United States, if visited an hour or two after a session has opened on a winter day, will be found to contain children, almost all of whom have pallid faces and lustreless eyes, no matter how bright they may have been two hours before. The teacher will frequently be found in the same condition; oftener, however, the earnestness peculiar to the conscientious teacher will have combated the stupefying influence of the air, and the result will be the same as that which follows a physical struggle against opium or any other narcotic; an unnatural excitement and uncontrollability ensues, and the teacher who naturally is patient, considerate, just, and kind, becomes fretful, unreasonable, flighty, and unfair. This is no fanciful statement; rare are the good teachers who will not admit that it faithfully describes their own experience twice a day and five days in a week throughout the season of closed windows and doors.

The remedy that naturally suggests itself is the frequent changing of the air by opening all doors and windows; but this plan, besides occasioning sudden and great changes of temperature, would make the warming of rooms impossible. Besides, occasional changes of air are not sufficient; the change should be continuous, so that pure air may be steadily admitted and foul air steadily expelled. When this is done, the ingress of cold air is not rapid enough to occasion chilling draughts. There are mechanical methods of obtaining this result; a system combining force and suction is sufficient, but this is generally dependent upon a steam-engine as the motive power, and such a plan not only implies the great expense of an engine but also that of a superior engineer, for no ordinary man—certainly no school janitor—could be trusted to manage so dangerous a machine in a building crowded with precious lives.

The desideratum of pure air, continuously supplied at small expense, and without need of any personal attention has lately been realized in some school rooms in Jersey City by a very simple contrivance, which has already been used, successfully used,

in mills, railway cars, and elsewhere, where steady change of air is necessary, but draughts intolerable. A flue, either specially constructed or perhaps any old one that may have been in use, is terminated at the roof by a cap so constructed that air enters chambers on its outside and moves *spirally* to its top, where it creates a current which sucks the air steadily from the inside of the flue. The force of air in these spiral chambers is communicated by the wind, the openings of the chambers radiating to all points of the compass. These chambers narrow rapidly toward their exit, so that a light breeze, moving barely a mile an hour, has its momentum multiplied several times before it finds an exit. The effect is exactly that of a miniature whirlwind, the principle being precisely the same, and the only difference being that instead of sucking up and scattering dust, leaves, &c., it gathers and dissipates bad air. Registers placed in windows or walls allow a gentle influx of pure air to replace that removed through the flue.

At first thought it may appear that such a contrivance would be effective only on windy days, as moving air is necessary to momentum. The fact is, however, that, except during a few days in midsummer, when schools are either not in session or when all doors and windows may safely be left open, there is always air in motion at the level of house-tops. No matter how still the air may be at the level of the ground at other times, it is almost impossible to find a day when flags on house-tops or shipping are not in motion, thus showing the existence of currents of air. A breeze that will lift a flag is amply sufficient to the purification of a school room by the means suggested.

As for the physical results of such a plan, they are simply incomputable. It is useless to feed children properly and clothe them well if during five or six hours of every day they are to be robbed of vitality by such a remorseless thief as impure air. It is no exaggeration, but an understatement of the truth, to say that the possibilities of school-room education are decreased fully one-half by the weakening process to which school-room air subjects juvenile brains.

We would consider parents crazy who gave their children a moderate dose of opium, tobacco, or some other stupefying drug before setting them at their studies, but these narcotics would be no less weakening and paralyzing in their effects, nor any less poisonous in their permanent effects, than the air of most of the school rooms to which we send our children year after year. Against this great evil teachers are practically powerless and school officers strangely apathetic. The only hope is in the parents themselves, whose interests are greatest and who pay the taxes from which come the money for managing or mismanaging the public schools. With cheap and practical means at hand for preventing the evil, which is injuring the rising generation more insidiously, yet far more fearfully, than any epidemic disease could do, the evil can be remedied. Let parents insist upon the change, for they may be sure that no one else will do it.

The Providence Medical Association, through their committee, Drs. Newell, O. C. Wiggins, and Anthony, have been looking after the physical welfare of the children of Providence. This committee have submitted a lengthy report to the school committee. They believe there is a grave necessity for improvement in the physical condition of the children of the schools. They have not sturdy and compact frames, nor do they exhibit a glow of vigorous health; their cheeks are pale, their limbs slender, chests narrow, muscles soft and flabby. Physical deformities are not unfrequent. Their teeth decay prematurely. They have not that physical capacity from which at maturity we have reason to expect numerous and healthy offspring, arduous and sustained labor, or ability to withstand the weather. They observe that robust children, who enter the public schools at the age of five, in the course of a single year generally lose their sturdy and robust appearance, and on leaving the school for continuous out-of-door life they greatly improve in their physical condition. Habitual truants exhibit physical stamina above the average of those in regular attendance. Defective eyesight is found to be increasing just in proportion to the length of school life. The committee think that these physical imperfections are caused, or greatly aggravated, by faulty school management. They believe that profitable mental occupation of these children varies from eight to sixty minutes each day, according to age, teacher, weather, ventilation, and other circumstances. The rest of the six hours, except two recesses of fifteen minutes, is spent in misdemeanors or idleness, often in constrained quiet on hard seats and in poorly-ventilated rooms.

The following objections to these schools are given by the committee:

"1. Children are admitted into them altogether too young. Their tendency now is to develop brain without muscle, to produce precocity of intellect, and to prevent the coordinate growth of the body. Prolonged mental effort of these young children soon tries the brain, and, if too long continued and repeated, its normal growth is interfered with, and it becomes prematurely developed.

"2. Through long and irksome sedentary confinement of young children in the vitiated air of the school room, these schools are a cause of consumption. They not

only lay the foundation of this disease, but develop hereditary tendencies which, by proper education, might be kept dormant for a life-time.

"3. They are a fruitful cause of the epidemic diseases of childhood.

"4. By the premature development of brain without muscle they are a fertile cause of nervous diseases.

"5. We believe that their influence is often unfavorable to morality. The long and irksome sedentary confinement produces irritations and excitable conditions of the system that lead to excesses in plays, in muscular movements, in language, in practices; and when the innocent and vile mingle indiscriminately, much moral evil may be done.

"6. The discomforts arising from the long sedentary hours are often the occasion of punishment, distaste for study, hatred of school teacher, and truancy."

"7. There are grave psychological objections to these schools. Children are expected to know more than they have time to learn. They must accumulate new impressions much faster than they can be received. Their minds are 'crammed' with a great deal of matter that is altogether unintelligible to them. They learn by 'rote' words, sentences, and tables that they cannot understand. The method is artificial, tends to produce mental distortion, and becomes a cause of stupidity by unduly stimulating the sensorium at the expense of thought.

"8. The present system of primary schools forms habits of indolence. Forced indolence of four or five hours daily soon becomes a habit."

The committee recommend the following changes in the schools:

"1. That children should not be admitted into them under seven years of age. Eight would be better. They believe that if admitted at either of these ages, under the same conditions, children will acquire as much intellectual culture by the time they arrive at ten as when admitted at five, as now practiced.

"2. At whatever age children are admitted into these schools their hours of confinement to intellectual effort should be greatly shortened, and the time thus freed should be given to physical training and amusement. They should not be confined to their seats or lessons for more than twenty minutes at a time, and during this period should be pleasantly and profitably occupied. Then they should have physical exercise or amusement for about twenty minutes in the open air, if the weather is not stormy; and, in that case, in a large, well lighted, airy room, all the time under the direction of a kind and judicious teacher. Then let them again return to their school room for twenty minutes more. So should mental and physical exercises alternate through the day. The children should often be taken to parks, commons, and vacant lots for amusement, recreation, and instruction. There various physical exercises or games may be learned and practical. As remarked by Dr. Seguin, in our parks especially children should not only find health but an idea. They should there be taught lessons in natural history, on the relations of animal and vegetable life, and the growth of plants. They should there find attractive scenes of nature in striking contrast with the dull school room and crowded streets; a place, in short, where they may learn to love 'not man the less, but nature more.' A portion of ground in our parks should be set apart for a garden especially adapted for the education of children. A bent may thus be given to the youthful, a taste formed for the cultivation of the soil, a branch of industry at present too much neglected."

The advantages of these changes would be:

"1. They would greatly improve the physical condition of children.

"2. They would greatly promote their mental improvement.

"3. They would relieve the teacher of the drudgery of securing proper decorum, since one-half of the pupils might be out of the room.

"4. They would relieve the children of the pains, irritations, and discomfort of confinement.

"5. They would add greatly to the attractions of the school room. Children always go to their amusements and physical exercises with the greatest relish.

"6. They would do away with much of the evil of poor ventilation.

"7. They would be highly beneficial to teachers.

"8. They would greatly remove the liability of the generation and spread of the epidemic diseases of childhood.

"9. They would prevent the formation of habits of indolence, and promote habits of quick, concentrated thought.

"10. The moral influence would be favorable, since pupils would be all the time under the eye of the teacher.

"11. They would call back the truant; a much better method than to drive him back by the strong arm of the law, as now proposed in this State."\*

\* The Sanitarian, July, 1879.

## 150 REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA.

TABLE E.—*Table showing operations of the physicians to the poor from (date of appointment) January —, 1879, to June 30, 1879.*

Sex and color.	Number attended.	Number dying.
White males .....	269	10
White females .....	328	12
Colored males .....	630	76
Colored females .....	697	59
Total .....	1,924	157

Number of visits made .....	9,239
Number of office consultations .....	2,657
Number of prescriptions given .....	2,673

Diseases attended.	Number of each.	Number dying.
Phtthisis pulmonalis .....	88	35
Pneumonia .....	70	26
Other acute lung diseases .....	262	5
Rheumatism .....	95	2
Typhoid fever .....	3	1
Malarial fever .....	154	1
Scarlet fever .....	11	5
Croup and diphtheria .....	30	3
Diarrheal diseases .....	204	8
Nervous diseases .....	80	8
Measles .....	59	3
Whooping-cough .....	61	9
All other diseases .....	507	51
Total .....	1,924	157

## CARE OF THE SICK POOR.

An urgent appeal for the provision of means for supplying medicines and medical attendance to the indigent sick was made in my last report, and on January 15, 1879, authority was granted to expend \$1,200 for this purpose, that amount to defray the expenses of the service to March 31 following, and I set out at once to organize the service and systematize its working. The first thing done was to appoint nine physicians, at a salary of \$30 per month each; then twelve druggists were designated and contract entered into with them to furnish medicines upon prescriptions of the physicians to the poor at reduced rates.

Knowing that the most rigid economy and closest surveillance would be necessary in conducting the service, explicit instructions were issued to the physicians, stating that reliance would be placed upon their judgment in determining those properly entitled to this charity, and judiciously selecting and prescribing medicines and appliances in the treatment of diseases, with a view to economy, as well as the best interests of the patient and the public. A sick pauper entitled to their attention and prescription was defined in plain terms, and they were then instructed in case of doubt to always lean to the side of humanity and sympathy for the suffering.

The following list of preparations, and the quantities designated, were given as being believed to be adequate to the requirements of this service; but, in extraordinary cases (the occasion or necessity being clearly stated and written on the face of the prescription), more expensive medicines or larger quantities were authorized:

Tinctures (standard): Mixtures—including syrups.—One prescription, not to call for a larger quantity than two ounces.

Decoctions and infusions.—Not in larger quantities than one-half pint.



Pills.—Not more than six.

Powders.—Not more than ten.

Ointments.—Not more than one-half ounce.

Suppositories.—Not more than three.

Blisters.—Not larger than 2 by 4 inches.

Syringes, adhesive plasters, surgical appliances, and such other articles as required in emergency, to be issued upon requisition, and the physician held responsible for the same.

The date of prescribing and the name of the patient to be in all cases written upon the prescription.

Contracts were then entered into with the druggists, wherein they agreed to furnish, at a price not to exceed fifteen cents for each prescription (agreeably to provisions of the foregoing list), medicines of best quality, including cinchona and its alkaloids, properly prepared and put up, upon prescriptions of the physician to the poor, and to furnish to the health officer weekly statements of accounts upon blanks furnished for that purpose, prescriptions being retained as vouchers. The physicians were also required to make weekly reports showing name of patient, location, age, sex, color, social relation, whether the attendance was by office consultation or visit, and general remarks.

The system worked admirably, and in a short time everything ran smoothly and the sick poor were well provided for. Before the expiration of the term for which the \$1,200 was furnished, an appropriation of \$5,000 for this service was secured, and the good work has been continued on the same basis, better results ensuing than I think could have been accomplished by any other system.

Various methods have been urged as substitutes, but nothing presented so far compares favorably with the one adopted. Some persons favored the establishment of a dispensary and the enlistment of a corps of volunteer physicians; but I think the failure of volunteer enterprises of most kinds, where considerable labor has been involved, is a sufficient argument against this method. Physicians, like most other mortals, like to be remunerated to a certain extent for their services, and, when acting in a volunteer capacity, prefer to go according to their own ideas rather than in conformity to any established rule set up by one acting as their director. System is required in all work, and unless the man is paid for his services he chafes under discipline. A paid corps of physicians for attendance on the poor is, of all things, necessary, and is as far superior to what it would be under a volunteer system as the paid fire department is in comparison to the old volunteer companies.

(In this allusion to the dispensary plan, I wish it distinctly understood that no reflection upon that worthy, benevolent, and well-conducted institution, the Central Dispensary, is intended. Indeed, it has rendered us large assistance in taking care of those patients able to present themselves for treatment, and is doing good work in its way. Volunteer physicians in this case attend, during certain hours in the day, all applicants who present themselves at the dispensary. This does not, of course, reach the class attended by the physicians to the poor, and the kind of volunteer service here involved is very different from covering a certain piece of territory, and being bound to answer, day or night, any call that is made.)

Again, it was asserted that it would be economy to buy medicines in large quantities and have them dispensed from a single establishment, located at some central point. The absurdity of this proposition must become apparent to every one upon a moment's consideration. Sick persons residing at remote points in the District would be liable to die in some instances before a messenger could obtain the medicines pre-



scribed. Another proposition was for several dispensaries at convenient points in the several sections. Here again it was found that the cost of maintaining these establishments, rent, salary of compounding clerk, &c., would more than counterbalance the saving in the cost of medicine. Again volunteers were proposed, but I am soundly opposed to volunteer systems. It is necessary to have men whom you can call upon at any time and of whom you can demand an explanation if their duty is not properly performed. This can only be accomplished by paying them for their work.

The foregoing table shows by sex and color, the number of persons attended, visits made, office consultations held, and prescriptions given, together with the number of deaths occurring during the six and a half months which the service has been in operation. The percentage of mortality among those attended is very large, which is accounted for by the wretched manner of their living, their want of proper food, clothing, &c. The large preponderance of colored persons treated and the extraordinary high rate of disease as well as death of the colored race, in comparison with the whites, is worthy of especial note. These figures will be of more value however when compiled for an entire year, and then more time and attention can be given them.

I think that the service has been conducted as economically as is possible for it to be done, and secure a proper performance of the work. The cost of medicines furnished for the period named was \$1,385.30. Salaries of physicians amounted to \$1,485, printing of reports, prescriptions, blanks, &c., about \$30, making a total of \$2,900 expended during the five and a half months. By averaging the expenses for first half of January at the same figure as the cost for latter half it gives us \$3,199.60 for the six months, or an annual cost of about \$6,400. I think about \$7,000 is required to conduct the service properly, and request that an appropriation for that amount be asked of Congress.

#### FOOD FOR THE SICK POOR.

In addition to the work of supplying the poor with medicines and medical attendance, we have also since March 1 been supplying the sick poor with food. In compliance with direction contained in letter of February 28 informing me that in addition to the \$5,000 specially appropriated for the sick poor, I was authorized to expend \$3,000 to furnish suitable food for the sick poor up to July 1, and to make such arrangements as deemed most judicious for effecting the objects contemplated, I proceeded at once to organize and systematize this service.

Through the medium of the physicians to the poor was considered the best means of dispensing this charity to those worthy of its benefits, and they were accordingly called upon to act in the double capacity of physician and almoner. Again they were informed that their judgment would be relied upon in determining those properly entitled to this charity, and they were impressed with the necessity for exercising the most vigilant care in its bestowal. They were instructed to be governed, in issuing orders for food, by the same rules as in the furnishing of medicines and medical attendance, and directed to confine themselves strictly to the destitute sick in giving orders. A list of articles of diet, such as would be suitable for the sick person and his or her family as well, was made, and contracts entered into with grocers at convenient points in the various sections to furnish these articles upon orders of the physicians to the poor at reduced rates.

Blanks were furnished the physicians for giving orders and making

weekly reports, and grocers were required to make, on blanks of the annexed form, combining certificate, statement, and receipt, their bills:

WASHINGTON, D. C., ———, 187—.

It is hereby certified that the following articles were furnished ——— on physician's order No. —, and in accordance with the terms of agreement with health officer, D. C.

————, Grocer.

Received the above articles this day, ———, 187—.

Name: ———,

Address: ———.

Witness: ———.

The system worked to our entire satisfaction, and I was agreeably surprised to find the expenditures from this source coming far within the limit of our most sanguine hopes and expectations. I think our experience in the distribution of this fund proves most conclusively that much of the charity dispensed in our charitable city finds its way to hands not worthy to receive it, and instead of accomplishing the good intended positively results in evil.

Now, I would not for a moment discourage the charitable mind in its effort to relieve suffering humanity—far from it; there is great need of labor in this direction. But I would say to those engaged in the distribution of alms, be careful, ascertain the worthiness of your subject, go in person, or send to his or her abode, ascertain if the objects of your charity make any effort to better their own condition; do not encourage professional begging, or entire dependence upon others. A little investigation will often lead to a change of opinion, and your charity will be saved for more worthy bestowal. Our investigations prove that the most worthy objects of charity are not those who proclaim their needs upon the highway and ask alms of all they meet. This class will bear watching. The public charities are the ones most preyed upon, however, and it is really surprising to know the class of persons who will apply for alms when it is known that any general fund is to be distributed.

Hundreds of applications were made to the physicians to the poor for orders for food by persons who were not in the remotest degree entitled to the benefits of such a charity. Acting under instructions to investigate every case carefully and satisfy themselves as to worthiness of applicants before giving orders, many of these unworthy ones were brought to light. When informed that they were able to take care of themselves, or that the fund was only intended for the really destitute they would reply that they "heard it was being given out and they thought they might as well get some of it as anybody else," or that they "had as much right to it as so and so," who had been helped &c.

By careful management of this fund and the investigation of all cases much has been saved, and yet I think no worthy person passed by. Two additional physicians were employed in connection with this service, and yet the expenditures to June 30 only aggregated about \$950. This would hardly be a fair statement on which to base an estimate for the amount required to conduct such service. The four months covered are not those in which the greatest suffering among our poorer classes

scribed. Another proposition was for several dispensaries at convenient points in the several sections. Here again it was found that the cost of maintaining these establishments, rent, salary of compounding clerk, &c., would more than counterbalance the saving in the cost of medicine. Again volunteers were proposed, but I am soundly opposed to volunteer systems. It is necessary to have men whom you can call upon at any time and of whom you can demand an explanation if their duty is not properly performed. This can only be accomplished by paying them for their work.

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usually prevails, but rather that period in which work is about beginning. I think, allowing for the increase of sickness and pauperism prevalent during the winter months four thousand dollars per annum devoted to this work would about cover the ground and accomplish much good.

#### THE YELLOW FEVER SCARE.

Shortly after the breaking out of the yellow fever at Memphis last summer a considerable number of persons in this city became much frightened, and persisted in the belief that our city was to be visited by the scourge. This feeling of danger was augmented by the circulation of sensational reports declaring that one or more cases had been imported and *did* exist in the District. These statements were of course devoid of any foundation in fact, and soon recoiled upon their projectors. No danger was at any time apprehended by this office; the city was in excellent sanitary condition, and as all arrangements had been effected for isolation and proper care of any case which might have been imported into our midst, we felt comparatively safe. A thorough cleansing and disinfection of the alleys was had, and disinfectants were used freely in all offensive spots where abatement of the nuisance could not at once be effected. Later on, it being considered necessary to make inspections of trains to ascertain if persons direct from infected districts were being brought to our city, application was made to the National Board of Health for funds with which to employ inspectors, we having no money to apply to such purpose. The National Board promptly responded, authorizing the employment of two inspectors for this service, and they were continued so long as the interests of the service demanded. Our sincere thanks are due the National Board of Health for valuable assistance and advice, not only in this, but in many other instances.

Fortunately we had no case of yellow fever during the entire year, although it reached points much more distant from the infected districts.

#### OFFENSIVE TRADES.

The suppression of offensive trades, or rather their confinement within certain limits, remote from densely populated sections, and the provision of means for destroying the offensive or deleterious odors generated, and abating other forms of nuisance created, is a subject demanding, and which has of late years received, the careful attention of health authorities in cities.

Public nuisances are created in the offensive trades either by storage and use of offensive material, or the production of foul, irritating, or destructive vapors and noxious gases, and the remedy for these necessary evils (as they seem to be) is the use of close receptacles in storing and conveying the substance and fixing of the condensable gases by forcing through condensers and purifiers, and then passing the combustible ones into an incandescent furnace to be destroyed.

The District of Columbia not being a center for manufactories of any class or kind, we are much freer from the offensive trades than most cities having our population.

However, we have soap factories, asphalt works, kilns for the burning of oyster-shells, and an ammonia factory; the last-named institution having caused no end of trouble and complaint in the "west end" of Washington.

"Ammonia and ammonium sulphate are manufactured in large quantities from the refuse ammoniacal liquor of gas-works. This liquor is very complex in its composition, containing ammonium hyposulphite, ammonium sulphide, ammonium carbonate and bicarbonate, ammonium

sulphate and chloride, with a small amount of ammonium sulphocyanide and benzoate, and from one to five per cent. of free ammonia. This liquor is distilled and the ammonia condensed in a "worm" as it passes over. When ammonia sulphate is to be prepared, the ammonia is passed immediately into a lead-lined tank containing sulphuric acid and the crystals raked out and drained of liquid as they form. The nuisance caused by these works is due to the sulphureted hydrogen which escapes in considerable quantity from the refuse-liquor. When the latter is run into a sewer the offensive odors may be spread along the line of the sewer for a considerable distance.\*

The factory alluded to is situated at the foot of H street, northwest, in close proximity to the works of the Washington Gas Light Co., and also in the immediate neighborhood of an asphalt refinery and kilns for the burning of oyster-shells into lime.

My attention was invited to the offensive odors and noxious gases said to emanate from this institution, soon after my appointment as health officer, and, as I learned, the matter had been called to the attention of my predecessors in office some time before, they having required parties responsible to put in a condenser, which it was supposed would remedy the evil.

The condenser put in did not, it was soon found, accomplish the desired result, and residents and property-owners in the vicinity were loud in their demands for abatement of the nuisance, many going so far as to declare that removal was the only mode of procedure which would satisfactorily accomplish the end; persons living many blocks distant complaining that the atmosphere was so freighted at times with the offensive odors as to make its breathing positively unendurable.

The statements regarding these odors varied so widely that it finally became a puzzle to the inspectors and myself to ascertain what institution was responsible for the nuisance. Complaints were made of the offense at times when it was ascertained that the ammonia works were not in operation, and as odors similar to those generated in the manufacture of sulphate of ammonia could also arise from the purifying-house at the gas-works, or from the tar-boiling establishments, or asphalt refinery adjoining, we were left in a quandary just how to act. Inspections were made night and day, and many interviews with persons residing in the locality were held. Circumstances at times pointed very strongly to the ammonia works, and the declarations made by old residents that such trouble was never experienced until after the location of these works in the section was a very convincing argument.

The opinion of Dr. De Smedt, our District chemist, was asked as to the best method of abating the nuisance, and he reported, after examination, that the addition of a condenser, so constructed as to condense all the steam from the exhauster, and a purifier, after the manner of those used in the gas-houses, would accomplish the purpose, or, instead of neutralizing and combining the obnoxious gases in a purifier, he thought they could be effectually destroyed by making them to pass through incandescent coke burning in a furnace arranged for that purpose. Action to this effect was accordingly required of the owner of the works and they cheerfully complied with our orders. Even this, however, has not proven entirely satisfactory, and it is now supposed that the pipe for conveying the steam, &c., from the condenser to the furnace is not of sufficient capacity; this will be remedied shortly, and then it is earnestly hoped that the nuisance will be abated.

The nuisance arising from burning of oyster-shells is caused by the ani-

mal matter contained in them and the portions of flesh adhering thereto, and can be avoided either by conveying the smoke to the furnace and destroying the odors by burning, or by burning the shells only after they have become completely dry.

The refining of asphalt for paving purposes is an offensive trade which has sprung into existence in the District during the past few years, and lately has been the source of much complaint from our citizens.

"Asphalt is a smooth, hard, brittle, black, or brownish-black, resinous mineral, having a conchoidal fracture, and a streak lighter than the broken surface with which it is made; specific gravity 1 to 1.68; odor bituminous, becoming stronger by friction; melts at about 100° C.; easily taken fire and burns with a bright but very smoky flame. Like all bituminous substances, it is a product of the decomposition of vegetable matter, consisting chiefly of hydro-carbons with variable quantities of oxygen and nitrogen, and yields by dry distillation a small quantity of ammoniacal water, empyreumatic oil, and a residue of charcoal mixed with variable quantities of inorganic matter. It is separated from the minerals with which it is associated either by boiling with water, which causes the bitumen to run out in the melted state; or by the action of hydrochloric acid, which dissolves carbonate of calcium and leaves the asphalt; or with oil of turpentine, which dissolves out the bitumen.\*"

The method pursued in the refining of the crude asphalt here is by placing the material in large kettles having a capacity of several tons and applying heat until the water it contains is evaporated.

The crude asphalt from Trinidad contains about 35 per cent. of impurities, consisting chiefly of water, siliceous and vegetable matters, and a small quantity of chloride of sodium and sulphur. After the asphalt is entirely free from water and has acquired a heat of 350° F., a great quantity of the solid impurities subside to the bottom and the material is ready for use. The offensive character of this business is caused by the sulphuretted hydrogen and other gases of sulphur compounds evolved and thrown off in the boiling process. These gases can, we are informed on the best authority, be easily destroyed either by combustion or by neutralizing the sulphur compounds.

The experience of the health authorities of this District in endeavoring to accomplish the abatement of these nuisances, like that of most other cities, has not been very satisfactory. There is always some question as to the injury to health resulting from these places, and it is difficult to establish this fact and make a clear case under the health ordinances. The injury to trade which would result by their condemnation is taken into consideration, and I regret to say that this far outweighs in many instances the injury to health resulting from their stay.

The best way to accomplish the abatement of this class of nuisances would be by compelling all persons to obtain a permit from the health authorities before an offensive trade could be conducted. In this way they could be confined within proper limits, and, upon violation of the terms of the permission, be removed.

Aside from the action of the health authorities, however, when any institution becomes a nuisance to the comfort of the neighborhood, the citizen has his resort to the grand jury, where an indictment can be obtained against the offender.

#### THE POTOMAC FLATS.

I am fully and painfully aware that nothing new can be said on this subject. The subject has been exhausted, and nothing accomplished. We can only hope that Congress may be brought to look upon this fes-

\* Dictionary of Chemistry: Watts.



tering sore in the same light that it is seen by our people, and that when another year has passed we may have the pleasure of recording the fact that relief has come at last. Let us all enlist in the good cause, and endeavor to secure a commencement of the work of eradicating this plague-spot.

#### OPERATIONS OF THE POUND.

The following report of Poundmaster Einstein is a most satisfactory exhibit of the work accomplished in the impounding of domestic animals. He shows that a very large mortality among the canines has been one result of his labors, and the District is certainly to be congratulated upon being ridded of several thousand worthless curs. His war upon the pestiferous goat has also been attended with success, and many large animals found running at large have been captured.

The duty of the poundmaster is no pleasant one to perform, and Mr. Einstein deserves the thanks of the community for the manner in which he has discharged his trust.

I would earnestly recommend that the poundmaster be invested with police powers.

#### REPORT OF THE POUNDMASTER.

##### OFFICE OF THE POUNDMASTER,

Washington, October 15, 1879.

SIR: In presenting my report of the operations of the pound service for the year ending June 30, 1879, little can be said other than what has been contained in the five annual statements which have preceded it. The service has been improving gradually in its working system year by year, until I think it has obtained a certain degree of perfection, the results attendant upon our labors ranking fully equal, if not superior to, those of many cities where the force employed and expenditures made are more than double ours.

The accompanying tabular statement shows, by months, the nature and extent of our work.

TABLE F.—*Tabulated statement showing monthly operations of the pound for the year ending June 30, 1879.*

Months.	Animals impounded.								Disposition.						Cash received from fees and sales.	
	Horses.	Cows.	Mules.	Hogs.	Sheep.	Goats.	Grease.	Dogs.	Total.	Redeemed.	Killed.	Dogs killed.	Died.	Returned.		Sold.
1878.																
July	5	3	1	7	....	3	....	765	784	61	720	718	....	....	3	\$81 35
August	2	16	2	3	....	8	44	842	917	97	815	812	....	1	4	129 00
September	1	9	1	4	....	7	9	521	552	55	495	492	....	....	2	96 75
October	4	13	4	8	....	21	15	512	577	93	481	472	....	2	1	165 25
November	2	11	....	....	....	12	20	378	424	65	359	353	....	....	....	96 75
December	3	6	....	8	....	8	12	333	369	42	324	318	....	1	2	59 00
1879.																
January	....	....	....	....	....	8	8	309	325	22	302	301	1	....	....	31 50
February	....	....	....	....	....	7	16	228	251	25	226	221	....	....	....	24 00
March	1	2	....	....	....	3	2	265	273	21	252	251	....	....	....	38 50
April	3	11	....	....	....	11	4	306	335	35	299	295	....	....	1	63 25
May	2	28	1	....	2	5	....	260	298	48	250	246	....	....	....	95 00
June	6	13	1	....	....	21	14	237	292	51	237	227	....	4	....	80 50
Total	29	112	10	30	2	114	144	4,956	5,397	615	4,760	4,706	1	8	13	960 85



## DOGS.

In point of number dogs rank first upon the table, 4,956 of these animals being taken during the year; this number being greatly in excess of captures made in any year preceding, owing to the fact that the taking of these animals was for the first time continued during the entire period. Of the 4,956 dogs captured, 4,706 were killed. Notwithstanding this large mortality enforced upon the canine population, they seem to hold their own pretty well and our daily raids seldom fail to add from ten to thirty to the doomed.

From whence come the reinforcements to their constantly thinned ranks is a conundrum which as yet remains unanswered.

If we could get a census of the dog population and then obtain reports as to increase, I think the vital statistics of our canine race would prove both startling and interesting. If the birth rate could be shown to equal that of the death rate, and it would transpire that there is no decrease by deaths over births and importations, I think the healthfulness of Washington, as a dog city, over that of any other place, would be firmly established.

There were 5,281 dogs licensed during the year; add to this number the 4,706 killed and it gives us 9,987. I have no doubt that at least one fourth of the entire population have escaped both the tax and the dog net, and am accordingly satisfied that the number which infest our cities will not fall far short of 15,000. The new dog law has accomplished considerable in the right direction, but it is found to be defective in some technical particulars, amendment of which should be secured when Congress again convenes. It has been fully shown that dogs may be made a source of revenue for the District, and the authorities should not let from \$10,000 to \$15,000 per annum slip from the treasury without an effort to retain it. I think the continued war on dogs is resulting in an improvement in the class kept, and am of the opinion that the worthless curs will soon be entirely eradicated.

In my last report I spoke of the method pursued in killing dogs here as being the most humane. Since that time I have visited the city of Baltimore and witnessed the drowning process followed there as in a good many other cities. The dogs, twenty-five in number, were confined in a wire crate, which crate was hoisted by means of a derrick, swung round and lowered into the water. The dogs themselves could not, of course, be seen, but the agitation of the water above showed that they were wrestling and struggling in agony below. After six minutes had elapsed the crate was drawn up, and even then the struggles of some of the brutes had not ceased. I was not favorably impressed with this method of killing, and am still of the opinion that our means is most satisfactory. The pistol being placed at a point on the head where, when fired, the bullet pierces the brain and penetrates the spinal column, insensibility and death are almost instantaneous.

## GOATS.

The number of goats captured during the year was 114, of which number 54 were killed and 60 redeemed. The total number captured is 48 less than for the year preceding, which is accounted for by the fact that the increase in the redemption-fee has made keepers more careful. A very large majority of these animals were taken from the northeastern section of the city, "Swampoodle" being the goatland of the District.

They have been much complained of on account of their destructiveness to trees, &c., and I have been compelled to raid them night and day.

#### LARGE ANIMALS.

The number of large animals, such as horses, mules, cows, &c., taken during the year varies but little from the number captured in former years. The captures of this class of animals result mainly from carelessness of keepers; boys in many instances going off to participate in some game, allow the animals under their care to wander off on to parks or other places whence they are taken by the pound man, who gets curses loud and deep for his action. We have to suffer much abuse at times for performing our duty, but consciousness of right enables us to bear it calmly. The better class of citizens, I think, appreciate our work, and this is encouragement enough. The recent extension in the area for taking up and impounding domestic animals has increased our labors correspondingly, but report of results therefrom will have to be recommended next year.

The necessity for proper pound buildings, &c., still exists and is felt more and more every day. I trust something may be accomplished in this direction ere another year.

Trusting this exhibit may prove satisfactory and that I may continue to merit the confidence heretofore bestowed,

I remain, very respectfully,

SAMUEL EINSTEIN,  
*Poundmaster.*

SMITH TOWNSHEND, M. D.,  
*Health Officer, District of Columbia.*

#### EXAMINATIONS TO ASCERTAIN LOCAL CAUSE OF ZYMOTIC DISEASE.

The following report of the medical sanitary inspector exhibits the results attendant upon inspections in 187 cases to ascertain local cause of disease upon premises where fatal cases of zymotic disease have occurred.

This statement shows but too plainly the necessity for securing reports of cases of zymotic disease, that inspections may be made before death has made it too late to benefit the sufferer. I would invite the earnest attention of both physicians and the heads of families to a consideration of this matter. A prompt report of the existence of any case of typhoid or scarlet fever, diphtheria, or other form of preventable disease, will enable this office to take timely action, and may result in saving the lives of many.

I would also in this connection invite attention to the necessity for more rigid rules regarding the admission into schools of children from families afflicted with scarlet fever. It is a fact pretty well established that public schools are largely responsible for the spread of this disease in communities, and significant as an argument in favor of this theory is the fact that the mortality records of this and other cities show a diminution in the deaths from this disease during the vacation season, and an increase again when the time has arrived for reopening of the schools. Children convalescing from this disease should be prevented from attending school until they have entirely recovered, and public funerals in all cases of contagious diseases should be forbidden.

The mortality from scarlet fever in New York last year was equal to that from yellow fever in the entire Union for the same period. This

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disease does not seem to be fully understood as yet, or the important place which it takes in our mortality records is not recognized. This is a subject which should interest every father as well as the physician and sanitarian. When we can get these three to unite in the endeavor to prevent the spread of scarlet fever, then will the curb be placed upon this destroyer.

TABLE G.—*Tabulated statement of investigations made by the medical sanitary inspector as to local cause of scarlet fever, diphtheria, and typhoid fever during the year ending June 30, 1879.*

Quarter ending—	Diseases.			
	Scarlet fever.	Diphtheria.	Typhoid fever.	Total.
September 30, 1878.....	15	10	17	42
December 31, 1878.....	19	17	13	49
March 31, 1879.....	40	18	5	63
June 30, 1879.....	16	9	8	33
Total for the year.....	90	54	43	187
CONDITION OF PREMISES.				
Sanitary.....	68	35	31	134
Unsanitary.....	22	19	12	53
Houses sewered.....	17	16	12	45
Houses not sewered.....	31	19	9	59
Yards sewered.....	25	14	3	42
Yards not sewered.....	24	17	6	47
Water-closets in house.....	14	13	7	34
Water-closets in yard.....	13	5	2	20
Box in yard.....	63	36	34	133
SOURCE OF DISEASE.				
Foreign infection.....	1	2	4	7
Sporadic or unknown.....	8	35	32	75
Contagion.....	74	3	—	77
Crowd poisoning.....	—	1	—	1
Malaria from river front.....	1	—	2	3
Filth.....	—	1	2	4
Well-water (?).....	—	3	—	3
Malaria.....	—	—	1	1
Sewer-gas.....	3	2	2	7
Dampness.....	2	3	—	5
Stagnant water.....	—	1	—	1
Following scarlet fever.....	—	3	—	3
LOCATIONS.				
Northwest.....	31	36	17	84
Southwest.....	17	4	7	28
Northeast.....	7	6	11	24
Southeast.....	24	5	1	30
Georgetown.....	11	3	7	21

WASHINGTON, D. C., October 5, 1879.

SIR: I have the honor to present the following report, showing the nature and extent of my work as medical sanitary inspector for the year ending June 30, 1879:

There were a total of 282 deaths from diphtheria, scarlet and typhoid fevers, reported and 187 investigations made as to their local cause.

The foregoing tabulated statement shows the number of investigations by quarterly periods, the conditions of premises, locations, &c.

Four cases of typhoid, two of diphtheria, and one of scarlet fever were persons brought to the District sick with these diseases. Of the spo-

radic or unknown sources of disease, there were 75. In these cases it was impossible to trace the cause to any positive source; undoubtedly, however, in nearly all, if not the whole, there was some source to which the deceased had been exposed, and unknown to those who nursed and attended him. Perhaps it would be unfair to intimate that the attending physician might have erred in his diagnosis; but there were some anomalous cases.

Scarlet fever spread more by contagion than in any other way. In many of these cases the schools were the means of multiplying the disease. Parents are in the habit of allowing their children to attend school while some other member of the family is going through the different stages of scarlet fever or diphtheria; and in other cases they allow the convalescent to resume his attendance before the period of desquamation is over, or perhaps before any effort at disinfection has been made.

As long as physicians and parents do not report these cases when first recognized to either the health officer or school trustees, so that proper steps may be taken to prevent any spread of the disease as mentioned above, it will be impossible to check this means of contagion. Some law to meet such cases should be passed by Congress, making the penalty such that neither physician or parent could have any desire to evade it. The lives of our children demand this protection.

Another means of scarlatinal contagion among children is in the holding of public funerals in these cases. After death the child is "laid out" and his playmates are allowed to have a last look upon their companion, or on the day of the funeral the coffin or casket is opened for this purpose, and all are allowed to gather around and "pay their last respects" to the dead by gazing upon his features. At the same time they lay themselves liable to become infected, and in many cases go home to be sick, and perhaps die, of the same disease; while parents wonder and perhaps complain of the "dispensations of divine Providence."

In cases of death from a contagious or infectious disease, the deceased should be inclosed in an air-tight coffin or casket, and this casket not allowed again to be opened. The house and its contents should be disinfected under the supervision of a responsible and competent person immediately after recovery, or in case of death, immediately after the funeral. If deemed necessary, this disinfection could be done at public expense.

Another source of infection to which I wish to call your attention is the reprehensible if not criminal conduct of plumbers when called upon to make repairs of any of the water or waste pipes of a house. As a specimen of the manner in which this work is sometimes done the following illustration is given: In the eastern part of Washington a child aged nine years died of scarlet fever. On investigating the case I learned the following facts: About one week before the first child, an infant, was taken sick the water-pipes were frozen and the plumber who was employed to repair them tore up the bath-tub and water-closet and allowed them to remain so for several days without sealing the open waste and soil pipes. There had been no known exposure to the disease, as the first child taken sick had not been out of the house for some time previous, and there were no cases of scarlet fever in this locality at this time. There followed, in quick succession, five cases of scarlet fever, and one death resulted; all of which I consider directly chargeable to the criminal negligence of the plumber. Other cases equally reprehensible have occurred, although perhaps not followed by such disastrous results.

The plumbing in many of the houses here is negligently done. In many cases no traps are put in, and in many more no ventilation of the sewer attempted, the gases escaping into the houses, where they breed disease and death. Many of the residences having what are called "modern conveniences" are but death traps, and should be either re-modeled or condemned as unfit for human habitation. The soil-pipes, instead of being of the best cast iron with hermetical lead joints and lain in unyielding soil, are made of the cheapest material, usually of porous clay, the same material being used for the joints, and lain in a trench of unrammed earth, which soon settles, causing a break in the pipe or some of the joints that allows leakage of sewage and escape of gases.

Perhaps too much blame is sometimes put upon the plumber and not enough upon the owner. It is a well-known fact that many men who build "houses to rent" or "sell" give the work to the *cheapest* contractor and he sublets the plumbing to the lowest bidder, who, to make "day wages," is obliged to use the cheapest material and do his part of the work in the cheapest manner. The result is, the proprietor has his houses built so cheap that he can make money by either selling or renting; the contractor and plumber have made money by the poor quality of both material and work. But how is it with the occupant of these fine residences with bay windows and modern improvements? Does he make money? Is it not rather his doctor and undertaker?

Probably the best method of controlling the manner of constructing plumbing work in houses is by having it done under the supervision of a competent inspector, who will allow no poor or imperfect work to be done. A law governing this matter is also needed in this District.

During the year a number of reports were made to this office of supposed cases of small-pox. The investigation of these cases proved but one to be of that nature. This was a case of varioloid, the disease having been, it was believed, contracted in Montreal, Canada. This case was removed to the small-pox hospital and made a good recovery. The premises were disinfected and the inhabitants vaccinated, no spread of the disease resulting.

The case of crowd poisoning occurred in "Howard Row," southwest of the Capitol. These houses, and every room in them, were filled with colored people, and more especially where this fatal case of diphtheria occurred. No other cause likely to produce the disease being discoverable, it was undoubtedly chargeable to this alone.

In regard to the cases in which well water was supposed to have been the source of disease, it is well, perhaps, to make the following explanations: Two occurred on New York avenue, south side, between Sixth and Seventh streets northwest; the other on O street, between Fourth and Fifth, northwest. In the first-mentioned locality there were some six or seven cases, and as investigation did not discover a local cause, it was believed by the attending physician, as well as myself, that the well in the immediate neighborhood, and from which they obtained their drinking water, was contaminated by the sewer that run alongside, the arch of which extends into the hollow part of the well and above the water. The analysis of this water by the chemist did not discover any sewage or other foreign material that would be injurious.

In the other case the circumstances were not precisely the same. Here but one death occurred; the water from this well had not only a bad smell but taste also, and was reported to me as producing nausea and retching when drank in the morning. Analysis of this water found

nothing deleterious. The sewer in this case is but a few feet from the well, and at this immediate point an alley lateral empties into it.

Of the seven cases supposed to have been caused by sewer-gas, one case of scarlet fever has already been explained; another of this disease was on D street, between Ninth and Tenth northwest. In front of the residence the old sewer running from Grant Place, under Masonic Temple, and thence to Louisiana avenue, was broken, and the gas from it was believed to have been the cause. The other case was on Capitol Hill; the water-closet, on the second floor, was without sufficient water to fill the trap, and gas from this source was easily detected in the house.

The two cases of diphtheria were in the northwest part of the city; the traps of the waste and soil pipes being insufficient to protect the premises.

The two cases of typhoid fever occurred on Capitol Hill. In one of the houses there was defective fitting of the water-closet, and in the other gas escaped from the soil-pipe under the house.

Respectfully submitted.

THEO. MEAD, M. D.,  
*Medical Sanitary Inspector.*

SMITH TOWNSHEND, M. D.,  
*Health Officer, District of Columbia.*

#### PROSECUTIONS IN NUISANCE CASES.

During the year there were 73 cases referred to the attorney for prosecution under the health ordinances. The action of the office has been uniformly sustained by the courts, and, although we avoid prosecutions as far as possible, when it does become necessary to call upon the strong arm of the law we feel perfectly secure and well satisfied that our object will be accomplished. In many cases it does not become necessary to prosecute, even after the case has been referred; parties, finding that we are in earnest and intent upon securing the abatement of the nuisance, proceed with the work, and either the information is not filed or a *nolle prosequi* entered when the case comes up.

There were 27 such cases during the year. The usual course in securing the abatement of nuisances is to first notify the party responsible, giving a certain time for abatement; if at the expiration of that time the nuisance still remains unabated, a respectful letter is addressed to the party notifying him or her that it becomes my duty under the law to refer the case for suit, but before doing so I desire to be informed as to what action, if any, is proposed to be taken toward securing the abatement. In a very large majority of cases further action is not required, the nuisance being abated either before or upon receipt of this letter, while in a great many others action even to this extent is not necessary.

The court in several instances instead of fining the parties has ordered them to abate within a certain time, in accordance with instructions from this office. Nineteen such cases occurred during the year. This accomplishes the purpose and is just as satisfactory to us; our only desire is to secure the abatement of the nuisance. Fines were imposed in 10 cases, and 12 were dismissed on account of technical defects, defective ordinances, or for other reasons.

#### LEGISLATION NEEDED.

There are several subjects upon which legislation is sorely needed. We are still unable to satisfactorily accomplish the abatement of nui-

sances on property of non-residents. The law is not explicit enough on the subject of offensive trades, such as bone-boiling, soap-making, &c. Physicians should, I think, be required to report cases of zymotic disease occurring in their practice. (The necessity for this is known to every medical man, and the accompanying report of medical sanitary inspector, showing only inspections in cases where deaths have occurred, is certainly argument enough to convince the most skeptical laymen.) We should have laws covering the slaughter of animals for food, of which I have spoken in another place; and our ordinances relating to the abatement of nuisances affecting the public health, found to be defective in many points, should be generally revised and amended. All of which I trust may be accomplished by the committee to whom the revision of District laws in general has been referred by Congress.

#### GENERAL REMARKS.

There has been much accomplished during the year in the sanitary interest of our cities. First and foremost among the objects may be mentioned the filling of the old arch sewer running between Ninth and Tenth streets through squares 378, 379, 380, &c. This was a flagrant nuisance of long standing, and was one among the first things brought to my attention. The necessity for its immediate abatement was urged, and the engineer's department removed the evil by putting in a pipe-sewer and filling the old offensive excavation. Many grave nuisances have been removed from private property, public improvements have done much for our streets and alleys, and I think our office work will compare favorably with former years.

I have reason to congratulate myself upon the good fortune which attended me in the selection of my corps of assistants in the sanitary service. Earnestness, energy, and industry have characterized their work, and all have, I think, proven themselves competent to the tasks assigned.

I will take this opportunity to extend to the superintendent of police and his officers my appreciation of the cheerful and valuable assistance which they have rendered on many occasions, and also to return thanks to the gentlemen of the Surgeon-General's Office in this city for courtesies extended and assistance rendered.

#### REPORT OF AN INSPECTION OF CERTAIN PUBLIC BUILDINGS.

In common with a great majority of practicing physicians in the District of Columbia, I have been frequently called upon in my private practice to attend persons employed in the various departments of the general government in this city whose maladies pointed directly to the breathing of a poisoned atmosphere for their origin. In fact, the foul, unventilated condition of some of our public buildings has been a matter of common report, accepted by all as beyond contradiction, for years. Occasionally some sufferer has written a few lines on the subject, the press has made spasmodic outbursts, and I have even heard vague rumors and reports at long intervals of some proposed improvement.

There seems to have been, however, no one who considered it exactly his place or duty to point out the defects or propose a remedy. The soldier in camp, barrack, or hospital has his surgeon to care for him when sick, and officers to see that his quarters are in healthful condition when well. And so the sailor; with scrupulous care his surroundings are looked after, and every contrivance for the improvement of the sanitary condition applied. Even the marines—that best-abused corps of our country's defenders—their health and lives are looked after; but the



civil employé of our government is left out in the cold as regards sanitary care. He is placed in quarters the exterior of which have been the architect's chief care and are the builder's pride; massive and grand, in many instances, and most pleasing to the eye. The interior, too, is well provided for in many respects; fine carpets, fine furniture, fine hangings, the modern conveniences in the shape of a water-closet at one elbow, and a stationary wash-stand, with hot and cold water, at the other; a temperature almost reaching the nineties, and an atmosphere revolting to the lungs of one accustomed to pure air.

Considering it my duty as health officer of the District of Columbia to look into this matter of the condition of the public buildings, I have, in company with two assistants, made a personal inspection of the following-named structures, and would invite your careful attention to the following report thereon:

## TREASURY DEPARTMENT.

This vast building, covering an area of 528 by 300 feet of ground, and sheltering about 2,000 employés, engaged at the several different branches of industry necessary in making, issuing, and canceling the currency, and auditing the accounts of the financial departments of our government, was built at a cost of \$6,800,000, and furnished without the least provision being made for ventilation by other than natural means.

Our inspection was commenced in the Bureau of Engraving and Printing, on the fourth floor of the building, from whence we proceeded downward.

The following tabulated statement will show the title, dimensions, air-space, number of persons employed, and air-space to each in the rooms of this bureau:

ROOM.	Dimensions.			Air space.	Number of persons employed.	Air-space to each person.
	Length.	Breadth.	Height.			
Bureau of Engraving and Printing, Treasury Department.						
				<i>Cubic feet.</i>		<i>Cubic feet.</i>
Chief's office.....	22	20	12	5,280	2	2,640
Assistant chief's office.....	20.6	19.6	12	3,794	3	1,264.66
Accountant's office.....	54.6	21	12	13,734	17	807.88
Records and files.....	25	20.6	12	6,150	1	6,150
Vault.....	36	19.8	12	8,496	3	2,832
NUMBERING DIVISION.						
Examining-room.....	31.6	24.6	12	9,258	15	617.2
Separating-room.....	31.6	25	12	9,450	13	726.92
Numbering-room.....	96	20	12	23,040	55	418.90
BINDING DIVISION.						
Binding-room.....	88.6	20.4	9	16,204	6	2,700.66
Perforating-room.....	56.4	39	12	23,660	29	815.86
Milligan-press room.....	35	11	9	3,465		
Neale Appleton press-room.....	35	11.8	9	3,678		
Surface-sealing room.....	55	35	9	17,325	19	911.84
Wetting-room*.....				12,870	31	415.16
Examining-room.....	132	39	9	41,580	74	561.89
Hardening-room.....	47	19.9	9	8,354.3	2	4,177
Engraving-room.....	118	34.4	9	36,462	28	1,302.21
Stone-room.....	20	16	9	1,800	1	1,800
Superintendent of orders' room.....	19.8	17.4	9	3,066	2	1,533
Office printing division.....	20.8	17	9	3,162	7	451.71
Press-room†.....				97,173	446	217.87

\* Two rooms.

† Five rooms.



The air in all the rooms on the fourth floor in this bureau, with, perhaps, two exceptions (the engravers' room and the wetting-room), was unfit for breathing. There is abundant air-space, it will be noticed, in a majority of the rooms, if there was only proper means provided for removal of the air rendered impure. The great necessity for ventilation which has existed here is evidenced by the rude attempts which have been made to accomplish the object. Prominent among these is a series of skylights, which open by means of weights and rope-pulleys. These were found closed in every instance where a workman was stationed near, and they gave as a reason therefor that draughts were created whenever they were left open. This was always the case in windy weather, and rains or storms necessitated their being closed altogether.

The folly of depending upon windows for ventilation was illustrated many times during our inspection. The opening of a window occasions a draught of cold air, and the one employed near suffering therefrom is not slow in closing the aperture. Employés being stationed near the windows, in every instance, it is impossible to secure any supply of fresh air by this means. Windows are the sole dependence in a majority of rooms in this building. The only salvation of the employés in the rooms of this bureau is the large amount of air-space in a majority of the rooms.

The binding-room furnishes nearly 2,800 cubic feet of air space for each occupant, and yet the air therein to one coming from the outside was anything but pleasant. All the rooms are virtually communicating, being connected by corridors, which furnish free ingress and egress to the air from each other, and the impurities generated in each mingling, a combination of bad smells is met with everywhere. The stock and store rooms are close, stifling boxes, emitting their vitiated air into the work-rooms. The dressing-rooms, perfect pest holes. I cannot find terms too strong in which to condemn the system of what are termed dressing-rooms here, and it is earnestly to be hoped that proper provision will be made for the clothing of the employés in the building now in course of erection. Here are close attic rooms partitioned off into stalls, and literally packed with the clothing of those at work. Imagine the contents of the wash-baskets of a hundred or two hundred families strung up around a small-sized room; these garments, which have been for days, and often weeks, absorbing the impurities from the bodies of the wearers, now throwing off their offensive odors into the atmosphere, and that atmosphere being sent out to be breathed by those at work in the rooms adjoining. The only means of getting fresh air into these dressing-rooms, as they are termed, is by means of one, and, perhaps, in some cases two, of the skylight ventilators, already referred to, and which we found closed almost without exception. Upon opening them so as to be enabled to breathe ourselves, and inquiring why they were not kept open, the lady in charge replied that the draught on her head gave her cold, and she was forced to close them.

Into these close rooms all the "working clothing" is stored during the night while the workmen are at their homes, and is replaced by that worn to work in the morning. Combined with the odor from worn clothing came that of cold food also. Many, perhaps all, the persons employed bring with them their dinners or lunches, and this food is left either in vessels or in packages with the clothing during the morning hours. The disgusting odor which emanated from these places cannot be described. As I said before, the air from these rooms is carried out into the work-rooms, and this is also the case in every place where there is any unusual impurity generated. No provision whatever has been

made to isolate the offensive departments or to carry off the offensive odors therefrom. In the wetting-room the moist air was a relief to the lungs, and the air here is probably less impure, from the opportunities afforded for absorption of the impurities.

The atmosphere of the press-rooms was very offensive. These rooms, five in number, have it will be seen by reference to the foregoing table, less air space *per capita* than any of the others. The minimum quantity sanctioned by authorities is 500 cubic feet per head, where persons are employed at such trades as plate-printing, yet here we find but 217 and a fraction air space furnished for each. The large press-room is, I am informed, the largest room of its kind in the world, and an employé told me further, "the best." If such be the fact plate-printers in other rooms throughout the globe have my hearty sympathy. How air could be rendered more foul in this room and then be tolerated, I am at a loss to conceive; my head ached terribly after an hour's experience.

Think of a room or rooms covering 10,797 square feet of surface, employing 446 persons, generating impurities by the use of numerous chemicals on heated plates, and by other materials, numbers of gas-jets burning the oxygen from the air, and the surrounding rooms adding their impure air without means being provided for ventilation!

Public buildings and workshops, where great numbers of persons are crowded together, are beyond the control of natural ventilation and fresh air should be provided by well-devised means. It is just as important that we breathe pure air as it is that we eat pure food and drink pure water. Indeed, it is more important to attend to the cleanliness of a medium in which we are always bathed, and which is constantly passing in and out of our bodies, than of that which is occasionally introduced into an organ which contains a fluid possessing a certain antiseptic and destructive power over injurious substances. Many of us would hesitate long before immersing our bodies in a pool of filthy water, and it is time we were being educated up to the same repugnance for filthy air.

It is now a well ascertained fact that air only moderately vitiated, if breathed for a long time, day after day, produces the most serious results. "The train of evils," says one of our authorities, "is so slowly but surely laid as to escape the observation of an experienced medical man, who sees in a case of blood poisoning from impure air one of imperfect or defective assimilation, anemia, dyspepsia, hysterica, disordered biliary functions, or one of those indefinite or chronic ailments, which lead the way to the development of some visceral disease."\*

In the hardening-room, engraving division, we found several charcoal furnaces, and, practically, no means of ventilation.

The atmosphere in all the rooms was found about the same. The corridors are vast ducts for the transmission of foul air from one room to the other.

One of the water-closets was exceptionally free from offensive odors, and it was found to be one which had been particularly offensive at the time of a former inspection of the closets, and the engineer's attention being directed to it he had placed a small fan under the seat, constructed a duct to the roof, and keeping the fan in motion the foul odors were carried off most successfully. Upon visiting some of the others and finding them very far from pleasant, inquiry was made as to why the same course had not been pursued, but echo answered "Why?"

It would be useless to go on and describe the condition of each sepa-

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\* San. Ex., Water, Air, and Food. Fox.

rate room. The air was foul in all, and some means for the improvement of the defect in ventilation should be made at once.

The conditions before described can in no way be attributed to the officers in charge of this bureau. On the contrary, everything in their power has been done to better the sanitary condition of the rooms. The utmost cleanliness was observed on all sides, but the construction of the building and nature of work militates against their efforts, and they are but the sufferers.

Passing down on the third floor of the building, the rooms used by the Light House Board, Department of Internal Revenue, Comptroller of the Currency, Mint, Secretary's Office, &c., were examined. Here we had but a repetition of our experience above, the only difference being that the atmosphere was free from the odors of inks, clothing, &c. The air was impure, however, and no means are provided for ventilation. Transoms are supplied over the doors, but the air passing in from the halls is just as foul as that in the rooms, and consequently this affords no relief.

The secret of the foul air in the halls was found upon getting into the basement later on. This underground portion of the building is but a vast receptacle for the manufacture of foul air, which, by means of the stairways, is carried into the halls above, and thence distributed via the transoms into the rooms. The hottest air congregating and being held in the upper stories, attracts the air from below, which is always found forcing its way in volumes up the stairways. One need only to walk down one of these openings to have a practical illustration of this fact. The basement is filled with printing-offices, binderies, store-rooms, and workshops for the various trades, each of which contributes its share of impurity to the air which is sent above to be breathed by the clerks and other employés.

The rooms occupied by the Light-House Board, especially Nos. 22, 24, and 25, occupied by ladies, are very defective in ventilation, having only the windows and transoms to depend on.

The water-closets in the southwest corner of the building, on this floor, were very offensive, and the appliance of a ventilator similar to that used in the closet referred to in the Bureau of Engraving and Printing would be of great advantage. The soil-pipes attached to every closet in the building should have proper ventilating tubes. It is simply impossible to keep free from offense any water-closet discharging into an unventilated sewer connection.

Sewer gas is a subtle enemy to health, and we should be well entrenched against it in such a building as this. The odor of the sewers was plainly perceptible in nearly every closet entered. One or two of the rooms in which they were situated had means provided for conducting off offensive odors; but we are told it is a waste of ventilation when directed against avoidable pollutions of the air. Traps were found in these closets, but ventilation of the pipes will perform the great protection. No trap or seal is absolutely safe unless the pipe is ventilated.

Passing from the closets along the hall of the west wing, the rooms were each examined, but nothing new was revealed. Occasionally an open grate was found in a room, and in every such case, where it was in use, an improvement in the air was noticed.

A contrivance for admitting fresh air was noticed in some of these rooms and in many of the others afterward. It consists of an opening about one-half an inch in width just under the window-sill on the outside, whence fresh air was to enter, thence passing over and down was admitted to the room through a perforated board at the floor. There

have gone out of use for various reasons. Many were found plastered up on the outside, others closed from within, and they are generally spoken of as a "nuisance." Clerks sitting near them complained that the draught of cold air on their feet gave them colds. Then they interfered, it is said with the heating of the coils over which air entering passed, and they have been condemned as useless.

Draught is not ventilation. Good ventilation is the art of supplying to each room in a building pure air of a healthful degree of humidity, with an accompanying provision for the immediate removal of that which has been breathed, and in such manner that no draught is created. The impurity of air is detected by the nose. When we enter a room containing more than six volumes of carbonic acid in 10,000 of air we pronounce it "close," disagreeable, and our senses warn us that it is not the proper condition of the element in which we live; yet there is scarcely a room in this building which, after having been occupied two hours in the morning, does not contain this amount and more of carbonic acid and animal organic matter thrown off by the lungs in respiration.

In the files division, on the fourth floor of the north wing, the atmosphere was very offensive. These rooms are packed with shelves containing stubs, and being dark considerable gas has to be burned. Besides being in a very unhealthful condition, there must be great danger from fire. It would prove a perfect tinder-box in case of an accident of this kind. The water-closets on third floor in the northeast corner were also very offensive, having an insufficient water supply and no ventilation. They are also insufficient in number.

The rooms occupied by the Comptroller of the Currency in the west hall of third floor were in about the same condition. In room 30, organization division, air was very foul; here we found the window-sill ventilators closed. No change for the better was experienced in the rooms occupied by the Director of the Mint and his assistants. Room 33 was especially noticable for its foul air and offensive odors.

The employes in loan division are no better off. Indeed, working at night, as they do, burning numerous gas-jets, and being without means for the removal of foul air, it is wonderful that they exist. Inquiry among the employes here elicited the fact that headache is a common complaint, and in my opinion persons exposed to such influences must fall an easy prey to any disease which attacks the system.

On the second floor of the building it was but the same story—windows and transoms. Windows never opened except in warm weather; transoms open in a majority of cases; air in halls as foul as in the rooms.

In some of the rooms in the Secretary's Office and in the redemption division, we found piles of old currency which, after passing through hundreds and thousands of hands, is brought here and recounted, bundled, and canceled. The odor from this mass of filthy paper was plainly perceptible upon entering the room. Instead of being placed in these unventilated rooms to poison the air, special arrangements should be made for it in thoroughly ventilated apartments, and thorough disinfection be resorted to before handling.

The rooms in the south wing are in somewhat better condition, but there is room for great improvement even there.

In the basement, as I said before, there are numerous workshops, storerooms, &c. The bindery, on east wing, with all the impurities from glue, &c., attendant upon such an institution, the files-room of the Internal Revenue department, filled with old books, files, &c., carpenter and cabinet-making shops, printing offices, &c., all generating impure air to be carried aloft.

At the time of our inspection they were washing the floor of the west hall in the basement, it being a wooden one. As soon as we turned to descend the stairway to the basement the odor of soap-suds arising from the drying boards met our nostrils and was simply disgusting.

All the impurities which arise below are carried by means of the stairways and transoms direct to the lungs of the clerks above, and they are the ones who are most affected by foul air; sitting as they do all day at their desks, they do not throw off the poison as do those whose muscles are called into constant and energetic action.

*Diseases resulting from foul air.*—In 1874, out of a total mortality of 2,637 in the District of Columbia, 436 deaths resulted from phthisis pulmonalis, or consumption, and 237 from other diseases of the respiratory organs. In 1875 the total mortality was 4,352; of this number 579 died from phthisis and 621 from other respiratory diseases. In 1876, of the total number (4,246) phthisis claimed 595, and 578 more died from the other diseases of the respiratory organs. In 1877, out of a total of 4,103 deaths, 609 resulted from phthisis and 475 from other respiratory diseases; and from the total of 3,023 dying during the nine months ending June 30, 1878, phthisis claimed 550, and the other respiratory diseases 257.

Here we see in the four years and nine months ending June 30, 1878, consumption has taken from our population in the District 2,769 persons, while the other diseases of the respiratory organs have claimed 2,168 as their share of the victims. That air vitiated by respiration is the one great cause of pulmonary consumption, which may be transmitted from parents to children for generations needs no proof. It rests on too great a mass of evidence.

"I have always maintained [says Fox], and increased experience has only increased my previous conviction, that the impure condition of the air in our factories, public buildings, and dwellings has much to do with the prevalence of such diseases as phthisis pulmonalis, bronchitis, and pneumonia, which together make up nearly one-quarter of the total mortality, and if we could strike a telling blow at that great universal evil—namely, poisoning by impure air—we would do much to save life. Unventilated and overcrowded workshops, public buildings, and schools are the nurseries of strumous diseases which sap the life and strength of the community."

Dr. Parker mentions a remarkable circumstance illustrative of the connection of impure air and consumption. In the badly ventilated prison of Leopoldstadt, Vienna, 514 per 1,000 died of consumption, while in the well ventilated house of correction in London, 7.9 per 1,000 only died of this disease.

In Dr. Guy's evidence before the Health of Towns Commission, in London, he made some striking statements as to the journeymen printers of that city. He divided them into three classes. The first class consisted of men who worked in rooms where they had less than 500 cubic feet of air space per head. Of these 12½ per cent. had spat blood, and a like proportion had been subject to catarrh. The second class comprised men who had between 500 and 600 feet of breathing space each, and among them intermediate effects were noticed. The third class comprised men who worked in shops having more than 600 feet of air space per capita, and among these 4 per cent. had suffered from spitting blood and only 2 per cent. from catarrh.

The testimony of the most able physicians of this and other countries; the result of inquiries as to the prevalence of this disease among the picked men of the armies and navies of the world; the reports of hos-

pitals for consumption, and of committees appointed to make special investigations as to jails, workhouses, and schools, all in various degrees point to this one conclusion.

## WINDER'S BUILDING.

This building, situated on the corner of Seventeenth and F streets northwest, owned by the government and occupied by the Second Auditor and some officers of the War Department, although in somewhat better condition than the Treasury Department, can by no means be termed satisfactory as regards ventilation, heating, &c. The air in rooms on the upper floors was decidedly close at the time of inspection and temperature much too high. The necessity for economizing fuel has been one of the great drawbacks against ventilation in tenements, schools, &c., but this cannot be urged in the case of government buildings, as a majority of them are perfect hot-houses at all times.

The gentleman in charge of this building is an engineer, and is firmly convinced that thorough ventilation is secured, and I must say that his system of getting a large quantity of moderately-heated air into the rooms is vastly better than that of getting a small quantity parched. I think, if I remember rightly, he estimated his supply at 48,000 cubic feet per minute. But, notwithstanding this fact, air in many rooms in the upper stories was far from pure, and I can only say to him, with Bayliss, that—

“To secure good ventilation it is only necessary to remove impure air and that, with the whole volume of the atmosphere existing on all sides, a pressure equal to about fourteen pounds to the square inch, it is as useless to pump fresh air into a building as it is to pump water downhill.”

The water-closets and soil-pipes should also be ventilated, and a better supply of water be secured.

## GOVERNMENT PRINTING OFFICE.

This immense workshop, the largest of its kind in existence, employing 1,468 persons, and running hundreds of machines of various kinds, was found in very imperfect sanitary condition. Like the other public buildings, the windows and doors are expected to accomplish the ventilation, and no provision is made for isolation of specially offensive branches of the trades pursued.

The following table gives the information relative to dimensions of rooms, persons employed, &c.

*Government Printing Office.*

Room.	Dimensions.			Number of persons employed.	Air space.	Air space to each person.
	Length.	Width.	Height.			
	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>		<i>Cubic feet.</i>	<i>Cubic feet.</i>
Press-room .....	253	60	12.4	152	187,220	1,231.71
Dry-press-room .....	60	50	12.4	15	28,000	1,866.66
Composing room .....	313	60	12.5	300	236,976.66	756.58
Proof-room .....	113	22	12.5	32	30,862.04	964.44
Bindery-room .....	426	60	11	450	281,160	624.8
Folding-room .....	313	60	14	350	232,920	751.20
Record and specification room .....	113	60	14	*68	94,920	1,396
Do. ....	113	60	14	†88	94,920	1,078.63
Machine-shop .....	63	23	12	8	17,388	2,173.6
Carpenter-shop .....	40	20	16	5	12,800	2,560

\* Day force.

† Night force.

NOTE.—In reckoning air space for each person the amount displaced by presses, cases, machinery, &c., is not deducted.

Our inspection was commenced in the press-room. This room occupies nearly the entire ground-floor of the H-street wing of the building, and one-third the floor space, if not more, is covered with presses and other machinery.

Want of pure air here, as in the Bureau of Engraving and Printing in the Treasury, has led them to make an attempt at ventilation, and, as in the former case, virtually nothing, or worse than nothing, has been accomplished.

The device for supplying air consists of an opening about 2 by 10 or 2 by 12 inches in each window, made by removing a piece that size from the upper portion of one of the panes of glass in the top sash.

This aperture is to be opened and closed at will by means of a piece of tin, or sheet-iron, made to fit, working on a pivot, and to which a string is attached.

This is left, of course, to be manipulated by the persons employed near by, and to judge from the condition in which we found a large majority, about the only action taken is to close them when a draught is encountered. Even if left open, these would-be ventilators are inadequate to secure fresh air to the employes, and their area is insignificant and out of all proportion, compared with the total capacity of the rooms. There is no necessity for introducing fresh air into a building constructed as this one is. Draw out the foul air, and its place will be supplied without artificial aid. The constant use of oil, ink, &c., in large quantities, generate impurities in the atmosphere which should be removed, and in addition to this the water-closets and room for washing type and plates and for preparing ink pour in their share. The room for preparing ink and for washing type, &c., is but a corner of the closet room, being separated only by a board partition extending half-way to the ceiling. The door leading from this room into the press-room stands open, and all the offensive odors from closets, ink, plates, &c., are carried in, there being no other means of ventilation.

The closets are offensive, defective, and insufficient in number, there being only five bowls for the accommodation of all the male employes. These closets should be separated from the main building on every floor and have a free circulation of air all around them; the soil-pipes should also be ventilated.

The same isolation should be had in the case of the type-washing, ink-preparing, and other offensive departments.

The composing-room occupies the floor above the press-room, and is considerably larger. Three hundred persons are employed in this room, and, without deducting for the amount displaced by cases, machinery, &c., they are provided with 756.58 cubic feet of air *per capita*. There is no means of ventilation other than the small device in windows already referred to, and the air at the time of inspection was very offensive.

The water-closets here are situated similar to those in the press-room, are insufficient in number, having only six bowls for 300 persons, and very defective. They are of the pattern known as "pan closets," defective in principle and unsatisfactory in operation. Bayliss, in his "House Drainage and Water Service," says of the pan closet:

"As commonly made, the principal objection to this form of closet is that in addition to allowing the foul air from the sewer to escape it increases the mischief by manufacturing a great deal of offensive and dangerous gas on its own account. In use the side of the receiver against which the pan discharges its contents when tilted becomes coated with a mass of foulness which clings to and cakes upon it. \* \* \* It is no uncommon thing to find the inside of a receiver so clogged that it is dif-



fiicult to open the pan. Matter thrown out is often scooped up again as it returns to its place.

"Human excrement is naturally viscous and plastic, and when dashed against a rough surface like the inside of an iron casting it takes hold and clings, especially as it is untouched by water, which rushes down the basin and into the soil pipe when the pan is tilted.

"From this clinging matter, undergoing decomposition more or less rapid according to circumstances, there constantly arise gases as poisonous as any which comes from the foulest sewers. These gases are held under constantly-increasing pressure between the two seals, and when the upper seal is broken by tilting the pan, the water thrown down must of course displace the gases and force them out. If not thus liberated, they will come through the water seal in the pan.

"If the trap in the soil branch under such a closet is unventilated, its seal offers very little effective resistance to the upward passage of gases from the sewer and pipe. As a rule, the flow of water into closets of this kind is insufficient to flush the trap; consequently the seal is seldom completely changed, and there is almost always a mass of undissolved feces floating therein. With all these facts in mind, it is easy to understand why a disagreeable smell, and sometimes an overpowering stench, is instantly emitted when the pan seal of such a closet is broken."

The constant use of these closets by such a large number of persons, and the limited supply of water on the upper floors, renders ventilation of soil-pipes imperative.

The atmosphere in the proof-room was an improvement on that of the two former, but it too should be properly ventilated.

The bindery was very close. And here again we found an offensive department emitting its organic impurities into the work-room.

The room for preparing glue, in a corresponding position to that of the ink room on the first floor, opens directly into the bindery, and the offensive vapors thrown-off from this material are carried into the lungs of the employes. Here again the closets are ill-ventilated, defective, and insufficient.

In both the folding-room and Record and specification room ventilation is badly needed. In the latter a night force is worked and the numerous gas-jets contribute largely to the impurity of the atmosphere.

In a building constructed as this is, and using a large steam-power, the introduction of a system of ventilation by fans and air-ducts should not be expensive and very easily applied. The necessity therefor is urgent, and I sincerely trust that we may see its inauguration in the near future.

#### INTERIOR DEPARTMENT.

This building was constructed at a time when but little attention had been given to the subjects of ventilation and house-drainage, and in these points mainly it was found defective. It seems to have had careful supervision as regards cleanliness, and in this respect was in marked contrast to some others which have come to my notice. The time of inspection was a poor one to judge as to the degree of perfection attained in heating, and as regards light little need be said.

The building is poorly ventilated and the method of obtaining air for the heating apparatus is defective, and both of these faults must be attributed to those who planned its construction. Here is the great trouble. What is simple, and would be comparatively easy of accomplishment by the intelligent architect when planning his structure, becomes an almost insurmountable obstacle to him who attempts it



when the building is completed. There are many plans and devices for the ventilation of buildings, however, and some of them have considerable merit, so that much may be accomplished to the end of obtaining pure air, without costly or troublesome reconstruction.

One great defect is in not having the air-ducts for supplying the coils take their supply direct from the outer air.

The air which supplies the coils in the west wing of the building is taken from a long narrow corridor running two-thirds of the length of the basement and then having a window for its exit. Into this corridor there are numerous entrances or openings for air from halls and rooms below, and I found the musty, unpleasant, odor with which air emitted from a register above was freighted, and plainly perceptible in this corridor. On the north wing we found two which might be termed store-rooms, filled with misty papers, old furniture, &c., acting as reservoirs from which air-supply was to be drawn; they being in turn supplied by windows.

In the northeast corner the same order of things was found, the room here being filled with *débris* of various kinds.

The air in the file-room on second floor, adjoining the end room, east side of west wing in northwest corner, was very offensive. I would recommend that the end room be thrown open and form a part of the file-room, that some ventilation may be afforded by means of windows in the former.

The corresponding room on floor above would be benefited by like action. The "pump-room," in basement, needs ventilation badly. This might be accomplished by constructing a small duct and placing a fan in operation, so as to carry off the foul air.

Other defects of a minor character were pointed out to this person who acted as our guide, with report of which I will not, however, cumber this letter. Some action should be taken to improve the method of ventilation and air-supply ere the approach of another winter. During the warm season air can be had from the windows and doors which are constantly open, but when the time arrives for keeping these apertures closed, and the occupants of the rooms must depend mainly upon the registers for their lung food, care should be observed that the air supplied is free, as far as possible, from all contamination.

I would in this connection invite your attention to the necessity for obtaining, ere its completion, the best possible ventilation in that portion of the building now in course of reconstruction.

The sewerage of the building should be, in my opinion, entirely remodeled.

Under the corridor in south wing of basement there are two small brick sewers, and to their defective condition can, I think, without doubt, be credited the evidences of dampness which pervade the adjoining walls in numerous places, and also the offensive odors which were complained of in many of the rooms. Brick is not suitable for house sewers, as rats find their way in and through, and defects are constantly found in the cement or mortar which unites them. A good terra-cotta pipe of sufficient size and properly laid, substituted for these two brick sewers, would be a great improvement to that wing of the building. The lead waste-pipes running on either side of corridors in east wing are also defective in many places; they should be replaced by pipes of galvanized iron. The closets and stationary wash-stands also need a careful overhauling by some competent plumber; several of them were found without proper taps or seals against the return of gases from the sewer, and an untrapped entrance to sewer in east side of the court-yard was also noticed.

Another thing that is badly in need is the ventilation of these sewers. There is no provision whatever for this important object, which is really as necessary as the supplying of traps and seals.

The entire system of sewerage and the plumbing of the building needs revision under careful and competent supervision and the introduction of more approved appliances than those now in use.

#### CONCLUSION.

In concluding this report I only say that I earnestly hope action may be taken at an early day looking to the ventilation of the public buildings in this city.

Ventilation is the one thing wanting, and none of them are free from the defect. The architect of the future will give more study to this subject than has his brother of the past, or in all probability one terming himself a ventilating engineer will be found taking a prominent hand in all his plans.

Were all our public buildings thoroughly ventilated I am confident that a marked decrease in the death-rate of the District from certain diseases would result.

I will not attempt to give a plan for the accomplishment of the purpose; there are architects and engineers in the government employ more competent than myself to devise means to this end. It is only necessary to remove the foul air from corridors and rooms and then to preserve a uniform temperature.

#### VITAL STATISTICS.

The progress of work in this branch of the service during the year has been most satisfactory, and the records at the present time are probably in more perfect order than at any period since establishment of the bureau.

In July, 1878, when I took charge of the health department, I found the death certificates recorded only to March 1, 1878, four months in arrear, while no index to these most important records had been completed later than August 31, 1875. The record of births was completed only to March 1, 1878, and indexed only to September 30, 1875. The record of marriages was completed to April 30, 1878, and only indexed to September 30, 1875. Still-births were not recorded later than December, 1877; the record of foreign deaths had not been commenced, the certificates for four years being unentered, and record of transfer and removals was in same condition.

The arrangement for filing certificates being very incomplete and insufficient, these documents were found in piles, dust-covered and confused. Work was at once commenced to place things in the best possible order, and so complete records as to have them available for daily use. This was a long and tedious task, but to-day it affords me pleasure to state that all records are completed up to date, or as nearly as delivery of certificates will permit; a complete vowel index to register of deaths has also been finished, and all certificates are carefully and neatly filed in nearly two hundred file-cases, all labeled and numbered, and certificates thereby rendered easily accessible for reference.

The value of a full and correct record of vital statistics is recognized in all the older countries, and is coming to be more and more extensively demanded in this country.

"Registration fulfills many useful purposes. It serves in the first



for each year. The average annual percentage of increase among the whites being 1.75, colored 0.65.

The annual increase in our mortality can, I think, be accounted for in the largely increased and increasing population of our cities (not taken into consideration in the mortality statements), rather than in any decrease in their healthfulness. The census recently taken by the assessors of taxes, incomplete as such an enumeration must necessarily be, shows for our cities over 160,000 inhabitants, upon which figures our rates and percentages have been based heretofore. Therefore, taking into consideration the conditions under which this census was taken and the large increase even then shown, I have considered it just and fair that our population be estimated at 170,000 (114,000 white and 56,000 colored).

Taking these figures as a basis, it is shown that the increase of population since the last national census of 1870, when it was 131,700 (91,567 white and 40,133 colored), to 170,000 at the present time, shows for eight years an average annual percentage of increase in the total population of 3.701—white 3.105, colored 4.808—which presents a very gratifying exhibit of the healthfulness of this District.

Table I exhibits the causes of death of the 4,309 decedents, arranged under 250 specific names; these names arranged under 21 orders; and the orders again arranged under 5 classes. In two cases no positive cause could be ascertained on account of length of time elapsing between the death and discovery of the deceased. Both, however, were believed to be the result of natural causes.

#### I.—ZYMOTIC DISEASES.

Nine hundred and ninety-three deaths, or 23.04 per cent. of the total mortality, resulted from zymotic diseases. As divided between the two races, there were 568 whites, or 25.87 per cent. of their total mortality; 425 colored, or 20.11 per cent. of their total mortality, and 887 from those of the miasmatic order. Cholera infantum stands at the head of the specific causes of death under this order, and numbers 189 victims, all but 7 of whom were under two years of age. Including this with the other diarrhœal diseases, namely, diarrhœa, dysentery, cholera morbus, and enterocolitis, there were 400 deaths, 319 being of children under five years of age. Aside from the diarrhœal diseases, the prevailing cause was scarlet fever; from this disease there were 129 deaths, 76 of which were under five years of age. Commencing with December, 1876, this disease has been continually existent in this District. Since that date to the 30th of June, 1879, no month has passed that more or less deaths have not resulted from this scourge of childhood. From the 1st of September, 1874, to the 30th of June, 1879, there have been 442 deaths from this disease—367 white, and but 75 colored children. From diphtheria there were 79 deaths—60 white, 19 colored.

But 20 deaths were ascribed to syphilis—10 white and 10 colored; to alcoholism but 3—white 2, colored 1. There were no deaths from either yellow fever, small-pox, or hydrophobia.

#### II.—CONSTITUTIONAL DISEASES.

Constitutional diseases claimed 1,109 of the decedents, or 25.74 per cent. of the total mortality; 548 whites, or 24.95 per cent. of their total mortality; 561 colored, or 26.55 per cent. of their total mortality. Under the diathetic order of this class are 23 specific names, 16 of which are for cancers alone; from these there were 89 deaths—13 white males,

place to facilitate the identification of individuals for the transmission of property, and for the protection of life against crime. It affords data for the determination of life contingencies, which form the basis of life-insurance. Lastly, it furnishes to medical and sanitary science information of the highest value concerning the state of the public health. \*

\* \* By means of registration, efficiently conducted, the sanitary authorities of any locality are promptly informed of the prevalence of preventable diseases, and are thus enabled to take the necessary measures for the protection of the public health with the least possible delay. Moreover, registration reports, taken in connection with the census, yield statistical results which throw light upon the casual conditions under which prevailing diseases occur, and thereby become the source of invaluable contributions to the science of preventive medicine.\*

Our record of mortality is full and complete, while reports of births and marriages are, I am grieved to say, as yet incomplete, and statistics relating thereto correspondingly unsatisfactory.

In order to afford the public all possible information on the subject of vital statistics thirty-four tables, two maps, and several charts have been prepared and are herewith presented.

During the year ending June 30, 1879, there were 4,309 deaths registered; certificates in each case giving the cause of death (primary and immediate), and as far as possible the complications of disease; the duration of last sickness, age, sex, color or race, birthplace, social condition, duration of residence in the District, and occupation of each decedent; where, when, and by whom buried, and name of medical attendant certifying to the death.

The total mortality (4,309) shows an annual death rate of 25.354 per 1,000 for the past year. Classifying the decedents by race and color, there were 1,130 white males; 1,066 white females; 1,051 colored males and 1,062 colored females. Showing a death rate of 19.263 per 1,000 for the white and 37.732 for the colored population.

The following statement shows the number of deaths occurring during each of the four past years ending 30th of June, viz:

Years.	White.	Colored.	Total.
1876 .....	2,086	2,074	4,160
1877 .....	2,187	2,021	4,208
1878 .....	2,166	2,065	4,231
1879 .....	2,196	2,113	4,309
Total .....	8,635	8,273	16,908
Average .....	2,159	2,068	4,227

During the year ending June 30, 1877, the increase of the mortality over that of the year previous was 48, or 1.15 per cent. The increase of deaths among the whites was 101, or 4.84 per cent., while the decrease among the colored was 53, or 2.56 per cent. During the year ending June 30, 1878, the increase in the total deaths over the year previous was 23, or 0.55 per cent. The decrease of deaths among the whites was 21, or 0.96 per cent., while the increase among the colored was 44, or 2.18 per cent. During the year ending June 30, 1879, the increase in total deaths over the preceding year was 78, or 1.84 per cent. The increase of deaths among the whites was 30, or 1.33 per cent., and among the colored 48, or 2.32 per cent. Thus, for the last three years there has been a gradual increase in the total mortality averaging 1.31 per cent.

\* Hygiene and Public Health: Buck.

for each year. The average annual percentage of increase among the whites being 1.75, colored 0.65.

The annual increase in our mortality can, I think, be accounted for in the largely increased and increasing population of our cities (not taken into consideration in the mortality statements), rather than in any decrease in their healthfulness. The census recently taken by the assessors of taxes, incomplete as such an enumeration must necessarily be, shows for our cities over 160,000 inhabitants, upon which figures our rates and percentages have been based heretofore. Therefore, taking into consideration the conditions under which this census was taken and the large increase even then shown, I have considered it just and fair that our population be estimated at 170,000 (114,000 white and 56,000 colored).

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49 white females, 3 colored males, and 24 colored females; or in every 1,000 deaths 21 resulted from cancers (a little less than the number in England, which is 23 in 1,000 deaths); 20 of the white females and 11 of the colored died of cancer of the uterus. Of cancer of the stomach there were 19 cases, 13 white and 6 colored, more than four times as many females as males dying from this cause. Of the tubercular order of diseases there were 935 deaths—214 white males, 232 white females, 220 colored males, and 269 colored females. The principal disease under this order is phthisis pulmonalis, or consumption; from this alone there were 716 deaths, or 16.62 per cent. of the total mortality. That is, in every 1,000 deaths 166 resulted from consumption.

### III.—LOCAL DISEASES.

Local diseases claimed 1,659 of the decedents, or 38.5 per cent. of the total mortality; whites 806, or 36.70 per cent. of their total mortality; 853 colored, or 40.37 per cent. of their total mortality.

Under this class there are eight orders, corresponding with the different organs of the body. Under the first order, that of the nervous system, there are 24 special names, and a total of 580 deaths, divided as follows as to race and sex: 160 white males, 121 white females, 167 colored males, and 152 colored females. Of these decedents 257, or nearly one-half, were under one year of age, and of these 257 infants, 169, or nearly two-thirds, were colored. Apoplexy and paralysis together caused a total of 120 deaths, 77 being white and 43 colored. Insanity 12; 9 white, 3 colored. But one case of sunstroke was recorded, and this of a colored man over 80 years of age. Epilepsy caused 8 deaths; 6 white, 2 colored. Under the circulatory order there are 15 special names of diseases. The principal causes here are those immediately affecting the heart; out of a total of 139 deaths, 87 were from causes pertaining to this organ, showing that in every 1,000 deaths 20 were from some heart-disease. There were but 8 deaths from aneurisms. From diseases of the respiratory organs there were 624 deaths, or 14.48 per cent. of the total mortality, and of this number pneumonia furnishes 406; 150 white, 256 colored, 26 white and 77 colored being under one year of age. Thus it will be seen that pneumonia is a very fatal disease among the colored people, they furnishing over 63 per cent. of the total decedents from this cause. From bronchitis there were 98 deaths; white 36, colored 62: congestion of the lungs, 85; white 42, colored 43. From diseases of the digestive organs there were 213 deaths, 55 of the decedents being under one year of age. From diseases affecting the stomach, 37 deaths occurred; intestines, 43; liver, 63; from peritonitis, 21; hernia, 7; intussusception, 5; and gall-stones, 1. Diseases of the urinary organs caused 76 deaths. Nephria or Bright's disease caused 21 deaths; white 9, colored 12: nephritis, 26; cystitis, 7, and Addison's disease, 1. From diseases of the generative organs there were 15 deaths, 14 of which were females. From locomotory and integumentary diseases there were 12 deaths.

### IV.—DEVELOPMENTAL DISEASES.

The number of deaths registered under this class is 396, or 9.19 per cent. of the total mortality; 203 white, or 9.24 per cent. of their total mortality; 193 colored, or 9.13 per cent. of their total mortality. Under this class we have four orders: children, women, old age, and nutrition. One hundred and eighty-six children fell victims to a lack of proper development before birth; of these 102 were white and 84 colored. From



child-birth and the accidents pertaining thereto there were 43 deaths of women, 23 white and 20 colored. Child-birth is but a physiological process and cannot of itself be called a disease; still it sometimes causes the death of the mother, and sometimes of the child.

In treating of the mortality from child-birth, we have to consider several cases. *Two lives* are at risk, and the following are the four possible combinations of their fates:

- |   |       |
|---|-------|
| (a) The mother (m) and child (c) generally survive.....   | m c   |
| (b) The mother survives (m) and the child (c') dies ..... | m c'  |
| (c) The mother dies (m'), the child (c) lives .....       | m' c  |
| (d) The mother dies (m') and the child dies (c') .....    | m' c' |

NOTE.—From the returns of the Royal Maternity Charity, it appears that 9,019 (m+m') mothers were delivered 8,998 (m) surviving, 21 (m') dying; while 9,117 (c+c') children were born, of whom 8,832 (c) lived, 285 (c') died, including 244 still-born, 41 live-born. Then, before delivery we have these four probabilities:

- m c .96648 mother and child will live.
- m c' .03119 mother will live and child die.
- m' c .00226 mother will die and child survive.
- m' c' .00007 mother and child will die.

Note that (m+m') (c+c') = 9,019 × 9,117 is the divisor of the numbers from which the probabilities m c, &c., are derived.

Thus the probability that the mother will live is .96648+.03119=.99767; will die, is .00233. The probability that the mother will live and the child will die is .03119. The probability that the child will live, is .96874; that it will die is .03126; mother and child survive in 966 deliveries out of 1,000; mother lives, child dies, in 31; mother dies, child lives, in 2 cases; in only .07 mother and child die. In case of two or more children the problem is somewhat more complicated.\*

Of the 43 women referred to, but 4, or 10 per cent., died from parturition direct; from puerperal convulsions there were 11; puerperal hemorrhage, 7; puerperal septicæmia, 4; puerperal peritonitis and fever, 10; placenta prævia, 3; and 2 from miscarriage. Old age and nutrition furnished 167 decedents.

#### V.—VIOLENCE.

Under this class are arranged 150 deaths, 3.48 per cent. of the total mortality; 70 white, or 3.19 per cent. of their total mortality, and 80 colored, or 3.79 per cent. of their total mortality. The deaths from violence are under three general orders: accidents and negligence, homicide, and suicide. Under accidents and negligence there are 35 specific names and 135 deaths, of which 31 were infants under one year of age. Among the decedents there were 8 from fracture of the skull; 2 were killed by railroad accidents, and 1 by being run over by a street-car; 6 by falls; 4 died from tetanus resulting from injuries; 4 were smothered in a burning house; 3 died from the shock of surgical operations (first, male, white, operation for epithelioma of hip and upper portion of thigh; second, female, colored, operation for hare-lip; third, male, white, amputation of lower third of femur); 27 from scalds and burns, 4 being caused by coal-oil accidents; 25 were drowned; 7 were suffocated by being overlaid by mother; opium is charged with the deaths of 3, and podophyllum of 1; 15 died from neglect at birth; there were 2 cases of death from fracture of long bones, and 7 deaths from the careless handling of fire-arms. Of the 8 cases of homicide, 3 were infanticides; 1 abortion; 3 by punctured and incised wounds; and 1 from gunshot wound. Of the 7 cases of suicide, 2 were by cut-throat; 2 by gun-shot wound of head; 1 each by arsenic and opium, and 1 by jumping from a building.

\* W. Farr, in Report Registrar-General, England, 1878.



TABLE I.—DEATHS.—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

Cause of death.	1878.																										
	DEATH-RATE.													RECAPITULATION.													
	Deaths per 1,000 inhabitants.		Total by color and sex.		Total by color.		Total by sex.		Total under 5 years.		Per cent. of each cause to total mortality.		July.				August.										
													W.		C.		W.		C.		W.		C.				
W.	C.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
CLASS I.—ZYMOTIC DISEASES.																											
Order 1.—Miasmatic.																											
Measles.....	10	.232	.061	.054	4	3	3	7	3	4	6	4	3	2	9	209	1	1	1	1	1	1	1	1	1	1	1
Croup.....	50	1.100	.298	.286	15	19	9	7	34	16	24	12	12	9	6	39	905	1	2	1	1	1	1	1	1	1	1
Diphtheria.....	79	1.853	.526	.339	25	35	10	4	17	12	25	44	12	17	8	3	40	1,940	7	5	2	1	5	3	4	2	4
Scarlet fever.....	129	2.994	1.026	.214	60	57	10	4	107	12	68	61	38	42	3	1	84	1,940	7	5	2	1	5	3	4	2	4
Typhoid fever.....	74	1.717	.395	.518	27	18	19	10	45	29	46	28	2	4	7	13	302	2	5	4	3	4	2	1	1	1	1
Intermittent fever.....	15	.348	.061	.143	7	3	3	5	7	8	6	9	2	3	2	4	11	255	2	2	2	2	2	2	2	2	2
Remittent fever.....	30	.694	.088	.292	5	7	3	4	6	10	11	9	2	1	2	4	10	232	1	1	1	1	1	1	1	1	1
Typho-malarial fever.....	25	.580	.135	.079	10	6	3	4	5	9	9	10	8	1	2	3	4	10	232	1	1	1	1	1	1	1	1
Malarial fever.....	13	.292	.079	.070	3	6	1	3	9	4	4	9	1	1	2	4	10	232	1	1	1	1	1	1	1	1	1
Cerebro-spinal meningitis.....	47	1.091	.292	.429	12	11	12	12	23	24	23	9	13	3	8	6	26	603	1	4	2	2	1	1	3	4	2
Dysentery.....	133	3.087	.509	1.339	31	27	37	38	58	75	68	65	14	19	33	35	101	2,344	3	2	14	12	5	8	7	10	4
Diarrhea.....	7	.162	.061	.071	2	5	7	7	10	10	11	9	2	5	5	5	10	232	1	1	1	1	1	1	1	1	1
Cholera morbus.....	189	4.386	.737	1.875	40	44	48	57	84	105	88	101	40	44	37	129	4,386	9	11	18	24	5	8	14	14	4	
Cholera infantum.....	24	.557	.123	.179	9	5	7	3	14	10	16	8	9	4	6	3	22	511	1	1	1	3	1	1	1	1	1
Enterocolitis.....	4	.093	.071	.071	4	2	2	2	4	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1
Tonsillitis.....	25	.580	.053	.339	1	5	12	7	6	19	13	12	1	5	12	7	25	580	1	1	1	1	1	1	1	1	1
Whooping-cough.....	16	.371	.114	.054	8	5	1	2	3	3	9	7	1	3	1	2	7	162	1	1	1	1	1	1	1	1	1
Erysipelas.....	3	.070	.026	.054	2	1	3	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Carbuncle.....	4	.093	.009	.054	1	3	3	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Pyæmia.....	2	.046	.018	.054	2	1	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Septicæmia.....	2	.046	.018	.054	2	1	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Total miasmatic diseases.....	887	20.587	4.570	6.536	263	258	187	179	321	306	450	437	146	166	144	134	590	13,691	25	37	43	46	25	25	36	32	32
Order 2.—Enthetic.																											
Syphilis, congenital.....	11	.255	.026	.143	1	2	3	5	3	8	4	7	1	2	3	5	11	256	1	1	1	1	1	1	1	1	1
Syphilis, tertiary.....	9	.209	.062	.036	4	3	2	7	2	4	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total enthetic diseases.....	20	.464	.088	.179	5	5	3	7	10	10	8	12	1	2	3	5	11	256	1	1	1	1	1	1	1	1	1

















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Cause of death.		1879.																							
		February.						March.						Total third quarter.						April.					
		W.			C.			W.			C.			W.			C.			W.			C.		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
CLASS I.—ZYMOTIC DISEASES.																									
Order 3.— <i>Dietic</i> .																									
Inanition.....		3	3	4	1	1	1							1	5	4	4	1	2	2	1	1			
Pyripura.....																									
Delirium tremens.....																									
Intemperance.....																									
Bronchocele.....																									
Total dietic diseases.....		3	3	4	1	1	1							1	5	4	4	2	2	3	1	1			
Order 4.— <i>Parasitic</i> .																									
Thrush.....																									
Ascariæ.....																									
Total parasitic diseases.....																									
Total zymotic class.....		20	17	8	10	17	12	9	11	58	48	27	24	12	21	9	9	19	13	10	11	51	50	32	36
CLASS II.—CONSTITUTIONAL DISEASES.																									
Order 1.— <i>Diathectic</i> .																									
Gout.....																									
Rheumatism.....																									
Dropsy.....		1	1	1	2		2		1	2	4	3	3	4	2	1	1	2							
Anasarca.....																									
Cancer, abdominal organs.....																									
breast.....																									
uterus.....																									
ovary.....																									
eye.....																									
face and scalp.....																									
stomach.....																									
liver.....																									
groin.....																									
neck.....																									
Total.....		56	51	84	82	82	84	51	56	32	36	82	84	51	56	32	36	82	84	51	56	32	36	82	84







TABLE I.—DEATHS.—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.									
1878.									
RECAPITULATION.									
Cause of death.	DEATH-RATE.			Total by color and sex.			Total by sex.		
	Deaths per 1,000 inhabitants.			Total by color.			Total by sex.		
	W. C.			W. C.			W. C.		
	W.	C.		W.	M.	F.	W.	M.	F.
Per cent. of each cause to total mortality.									
Total deaths from each									
Total diathetic diseases									
Order 1.— <i>Diathetic</i> —Continued.									
Cancer, nose									
larynx	1	.023	.009	1			1		
rectum	1	.023	.009	1			1		
back	1	.023	.009	1			1		
axilla	1	.023	.009	1			1		
Osteo sarcoma	3	.070	.018	1	1	2	1	2	
Leucocythemia	1	.023	.018	1			1		
Anemia	4	.093	.026	1	2	1	3	1	
Total diathetic diseases	174	4.038	.895	1,286	33	69	28	44	102
				72	61	113	1	1	6
				8	186	5	10	3	1
				4	2	4	2	4	3
Order 2.— <i>Tubercular</i> .									
Scrofula	24	.537	.079	3	6	7	5	21	.487
Scrophulous abscess	3	.070	.009	1			1		.023
Psoas abscess	5	.116	.026	1	2	1	3	1	
Rickets	4	.093	.026	1	2	1	3	1	
Tuberculosis	30	.696	.157	213	9	8	4	18	.403
Marasmus and typhoid mesenterica	73	1.694	.292	893	8	15	17	33	.738
Pituitaria pulmonalis	716	16.618	3.105	6,465	171	183	137	205	4.548
Hemoptysis (from tuberculosis)	6	.139	.044	.018	3	2	1	5	.113
Hydrocephalus	29	.673	.105	304	5	8	9	12	.273
Tubercular meningitis	34	.789	.132	338	9	6	13	15	.363
peritonitis	2	.046	.009	.036	1	1	1	1	.023
bronchitis	2	.046	.009	.018	1	1	1	1	.046
laryngitis	1	.023	.009	1			1		.023
abscess	1	.023	.009	1			1		.023
Hip disease	5	.116	.026	0.36	1	2	2	3	.070
Total tubercular diseases	935	21.701	3.912	8,732	214	232	220	269	6.038
Total constitutional diseases	1,109	25.740	4.807	10,018	247	301	248	313	7.646
				561	495	614	36	42	93
				19	247	255	19	24	27

## REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA, 193

TABLE L.—DEATHS.—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

Cause of death.	1878.												1879.															
	September.			Total first quarter.			October.			November.			December.			Total second quarter.			January.									
	W.	C.		W.	C.		W.	C.		W.	C.		W.	C.		W.	C.		W.	C.								
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.						
CLASS II.—CONSTITUTIONAL DISEASES.																												
Order 1.— <i>Diathetic</i> —Continued.																												
Cancer, nose.....																												
larynx.....																												
rectum.....																												
back.....																												
axilla.....																												
Osteo sarcoma.....																												
Leucoeythemia.....																												
Anemia.....																												
Total diathetic diseases.....	2	5	1	4	11	17	8	3	5	1	8	5	4	5	2	3	2	5	5	13	7	18	3	10	2	3		
Order 2.— <i>Tubercular</i> .																												
Scrofula.....																												
Scrofulous abscess.....																												
Psoas abscess.....																												
Rickets.....																												
Tuberculosis.....																												
Marasmus and tabes mesenterica.....																												
Phthisis pulmonalis.....																												
Hæmoptysis (from tuberculosis).....																												
Hydrocephalus.....																												
Tubercular meningitis.....																												
peritonitis.....																												
bronchitis.....																												
laryngitis.....																												
abscess.....																												
Hip disease.....																												
Total tubercular diseases.....	17	16	17	27	50	65	52	83	12	22	11	16	17	25	12	13	22	16	20	15	51	63	43	44	30	13	9	23
Total constitutional diseases.....	19	21	18	31	61	82	60	101	15	27	12	24	17	30	16	18	24	19	22	20	56	76	50	62	33	23	11	26



TABLE 1.—DEATHS.—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

AGE OF DECEASED.

Cause of death.

CLASS II.—CONSTITUTIONAL DISEASES.

Order 1.—*Diathetic*—Continued.

Under 1 year.			1 to 2 years.			2 to 3 years.			3 to 4 years.			4 to 5 years.			5 to 10 years.			10 to 20 years.			
W.		C.	W.		C.	W.		C.	W.		C.	W.		C.	W.		C.	W.		C.	
M.	F.		M.	F.		M.	F.		M.	F.		M.	F.		M.	F.		M.	F.		
Cancer, nose.....																					
larynx.....																					
rectum.....																					
back.....																					
axilla.....																					
Osteo sarcoma.....																					
Leucocythemia.....								1													
Anæmia.....								1													
Total diathetic diseases.....					2		1	2		1	2				1	7	4	1	4	1	1
Order 2.— <i>Tubercular</i> .																					
Scrophula.....																					
Scrophulous abscess.....																					
Psoas abscess.....	1	5	3	1	2	1	3	2			1										
Rickets.....																					
Tuberculosis.....							2	1													
Mucositis and tabes mesenterica.....	1	4	2				1	3													
Phthisis pulmonalis.....	8	11	6	19	2	8	5														
Hæmoptysis (from tuberculosis).....	5	2	9	11	2		9	5			1	10	6		2	5	7	2	1	1	
Hydrocephalus.....	2	3	4	7	2	4	3	2							1	1	1	2			
Tubercular meningitis.....	5	4	2	1	1	2	4	1			2				1	1	1	2			
peritonitis.....																					
bronchitis.....								1													
laryngitis.....																					
abscess.....																					
Hip disease.....																					
Total tubercular diseases.....	22	29	25	39	8	9	31	20	1	1	17	9			2	8	10	4		6	
Total constitutional diseases.....	22	29	25	39	8	9	33	20	2	1	19	9			3	10	10	4		6	



TABLE I.—DEATHS.—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

AGE OF DECEDENT.

Cause of death.

CLASS II.—CONSTITUTIONAL DISEASES.

Order 1.—*Diathetic*—Continued.

20 to 30 years.		30 to 40 years.		40 to 50 years.		50 to 60 years.		60 to 70 years.		70 to 80 years.		80 to 90 years.	
W.	C.	W.	C.	W.	C.	W.	C.	W.	C.	W.	C.	W.	C.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
					</								





# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 199

TABLE I.—DEATHS.—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

Cause of death.	1878.												1879.																
	September.				Total first quarter.				October.				November.				December.				Total second quarter.				January.				
	W.		C.		W.		C.		W.		C.		W.		C.		W.		C.		W.		C.		W.		C.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
CLASS III.—LOCAL DISEASES.*																													
Order 1.—Nervous system.																													
Meningitis, cerebral					2		2	8	4	6	1		2				3		1		4		1	2	2			2	
Meningitis, spinalis					1		1	3	1								1		1		1		1	1	2	2		2	
Cerebritis	1		1	2	1	1	2	1	1	2							1		1		4		1	1	1	1		1	
Cerebral effusion					1	2	1	1	1	2			2				1		1		3		4	3	2	2		2	
Softening of brain							2	1	1	1			2	1			1		1		1		5	2	1	1		1	
Apoplexy					1	3	1	3	6	1	3	3	4	2	7	1		1		1		1	6	7	5	1	2	2	
Paralysis, general							3	6	1	3	3	4	2	7	1		1		1		1		1	6	7	5	1	2	
Hemiplegia	1		1				5	1	1	1			1				1	2		1	3	2	1	2	3		1	1	
Insanity, monomania, dementia, melancholia, mania							1		2																				
Epilepsy							2		1	1	1		1				1				3	1		1					
Sun stroke								1					1								1								
Convulsions																													
Laryngismus stridulus	1	3	7	3	8	9	23	24	1	2	7	4	2				6	1	4	1	8	4	7	3	21	9	2	1	4
Tetanus idiopathic																													
Tetanus nascentium																													
Cerebral anæmia	1		1				4	1	2	5			5				1		1		1		1	2	6	1	1	2	2
Congestion of the brain																													
Sclerosis	1		1	10	8	9	4	1	1	1	1	1	2	1	1		2	2	2	3	4	2	2	3	4	2	2	2	2
Abscess of brain																													
Compression of brain																													
Cerebro-spinal congestion																													
Myelitis																													
Organic disease of brain																													
Tumor of cerebellum																													
Total diseases of nervous system	6	7	11	5	41	38	47	45	11	9	5	12	16	8	9	7	14	6	18	10	41	23	42	29	18	5	13	11	
Order 2.—Circulatory.																													
Pericarditis																													
Endocarditis	1				1																							1	
Disease of heart (undefined)																													
Hydropericardium	1	1	1	1	1	1							1	1			2		1	1	3	1	1	2	1		1	2	







TABLE I.—DEATHS—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1870.

Cause of death.	AGE OF DECEDENT.										SOCIAL RELATIONS.									
	90 to 100 years.					Above 100 years.					Married.					Single.				
	W.	M.	F.	C.		W.	M.	F.	C.		W.	M.	F.	C.		W.	M.	F.	C.	Widow or widower.
	M.	F.	M.	F.	C.	M.	F.	M.	F.	C.	M.	F.	M.	F.	C.	M.	F.	M.	F.	C.
<b>CLASS III.—LOCAL DISEASES.</b>																				
Order 1.— <i>Nervous system.</i>																				
Meningitis, cerebral.....											2	2	15	16	11	9	1			
Meningitis, spinalis.....											1		9	6	8	3				
Cerebritis.....											1		6	4	3	2	1	1		
Cerebral effusion.....													2	2	2	2	1	1		
Softening of brain.....													17	22	7	5	3	4	4	11
Apoplexy.....													15	3	3	1	1	3	7	5
Paralysis, general.....													1	1						2
Hemiplegia.....																				
Insanity, monomania, dementia, melancholia, mania.....																				
Epilepsy.....											3		4	2			1			
Convulsions.....													4	1	1	1				
Coma.....																				
Coma-stroke.....																				
Trismus stridulus.....											1		24	17	75	54				
Tetanus stridulus.....																				
Trismus.....											1		1	1		1				
Cerebral aneurism.....													6	5	13	16				
Congestion of the brain.....													1	1						
Sclerosis.....											4	3	21	16	18	7	1	1	2	
Abscess of brain.....																				
Compression of brain.....											1									
Cerebro-spinal congestion.....											1					1				
Myelitis.....													1							
Organic disease of brain.....													1							
Tumor of cerebellum.....														1						
Total diseases of nervous system.....																				
													81	135	95	12	17	9	23	1
													102							2
Order 2.— <i>Circulatory.</i>																				
Pericarditis.....											1	1	2							
Endocarditis.....													1	1		1				
Disease of heart (undefined).....											7	2	1	1		1			4	
Hydropericardium.....											1		2	3	1				1	



TABLE I.—DEATHS.—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.																									
Cause of death.	Total deaths from each cause.	DEATH RATE.		RECAPITULATION.																					
		Per cent. of each cause to total mortality.		Total by color and sex.		Total by sex.		Total under 5 years.		Per cent. of each cause to total mortality.		July.													
		Deaths per 1,000 inhabitants.		W. C.		W. C.		W. C.		W. C.		August.													
		W. C.		M. F. M. F.		M. F. M. F.		M. F. M. F.		M. F. M. F.		M. F. M. F.													
		W. C.		M. F. M. F.		M. F. M. F.		M. F. M. F.		M. F. M. F.		M. F. M. F.													
<b>CLASS III.—LOCAL DISEASES.</b>																									
<b>Order 2.—Circulatory—Continued.</b>																									
Aneurism, aorta.....	5	.116	.044	5	1	5	1	5	1																
Aneurism, abdominal aorta.....	1	.023	.018	1	1	1	1	1	1																
Aneurism, subclavian.....	1	.023	.009	1	1	1	1	1	1																
Aneurism, celiac axis.....	12	.278	.053	107	5	6	6	7	5																
Hypertrophy of heart.....	44	1.261	.263	250	17	13	6	30	21	.023	.023	1	1												
Valvular disease of heart.....	6	.139	.026	3	1	2	3	4	2																
Fatty degeneration of heart.....	6	.139	.035	.096	4	2	1	4	8																
Angina pectoris.....	16	.371	.105	.071	5	7	3	1	1	.046	.046	1	1												
Embolism.....	2	.046	.009	.018	1	1	1	1	1																
Endocarditis.....	1	.023	.009																						
Dilatation of heart.....	139	3.226	.781	.893	59	30	25	25	84	55	4	1	1												
Total circulatory diseases.....												3	1												
<b>Order 3.—Respiratory.</b>																									
Asthma.....	3	.070	.018		2	1	2	1	2	1		1	1												
Laryngitis.....	2	.046	.018																						
Edema of the glottis.....	1	.023	.018		18	18	35	27	36	62	9	12	33												
Bronchitis.....	98	2.274	.316		1	1	1	1	1	1	1	1	1												
Pleurisy.....	4	.093	.035		2	2	2	2	2	2	1	1	1												
Hydrothorax.....	6	.139	.026		81	69	127	129	156	208	198	39	31												
Pneumonia.....	406	9.423	1.316		26	16	22	21	42	43	48	37	18												
Congestion of the lungs.....	85	1.962	.368		4	1	1	1	2	5	2	1	1												
Hemorrhage of the lungs.....	7	.162	.044		2	2	1	1	2	3	4	1	1												
Edema of the lungs.....	5	.116	.018		3	1	1	1	3	3	3	1	1												
Gangrene of the lungs.....	3	.070	.026		3	1	1	1	2	1	1	1	1												
Abscess of the lungs.....	1	.023	.009		1	1	1	1	1	1	1	1	1												
Coryza.....	1	.023	.009																						
Total respiratory diseases.....	624	14.483	2.210		143	109	190	182	252	372	333	291	63												
													54												
													133												
													124												
													374												
													8,680												
													5												
													6												
													7												
													10												
													8												

TABLE I.—DEATHS.—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

Cause of death.		1878.												1879.															
		September.				Total first quarter.				October.				November.				December.				Total second quarter.				January.			
		W.		C.		W.		C.		W.		C.		W.		C.		W.		C.		W.		C.		W.		C.	
M. F.		M. F.		M. F.		M. F.		M. F.		M. F.		M. F.		M. F.		M. F.		M. F.		M. F.		M. F.		M. F.		M. F.		M. F.	
																</													



TABLE I.—DEATHS—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEVIATES, FOR THE YEAR ENDING JUNE 30, 1893.

Cause of death.	AGE OF DECEDENT.																											
	Under 1 year.				1 to 2 years.				2 to 3 years.				3 to 4 years.				4 to 5 years.				5 to 10 years.				10 to 20 years.			
	W.		C.		W.		C.		W.		C.		W.		C.		W.		C.		W.		C.		W.		C.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
CLASS III.—LOCAL DISEASES. Order 2.— <i>Circulatory</i> —Continued.																												
																							</					



TABLE 1.—DEATHS.—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

Cause of death.	AGE OF DECEASED.						SOCIAL RELATIONS.											
	90 to 100 years.			Above 100 years.			Married.			Single.			Widow or widower.			Unknown.		
	W.		C.	W.	M.	F.	W.	M.	F.	W.	M.	F.	W.	C.	W.	M.	F.	
	M.	F.																
CLASS III.—LOCAL DISEASES.																		
Order 2.—Circulatory—Continued.																		
Aneurism, aorta.....							3								2			
Aneurism, abdominal aorta.....																		
Aneurism, subclavian.....									1									
Aneurism, celiac axis.....																		
Hypertrophy of heart.....							1		2	3	1					1		
Valvular disease of heart.....							4	1	2	3	5	2	3			4	8	
Fatty degeneration of heart.....							8	3	3	5	5	2	3			4	8	
Angina pectoris.....							2											
Embolism.....							4		4	4	1							
Epistaxis.....							3	4	2			1	1		1	2	1	
Dilatation of heart.....									1									
Total circulatory diseases.....			1				35	12	15	12	17	7	7	3	7	11	3	
Order 3.—Respiratory.																		
Asthma.....																		
Laryngitis.....							1					1				1		
Edema of the glottis.....																		
Bronchitis.....							6	3	2	1	11	13	33	24	1	2	2	
Pleurisy.....												1						
Hydrothorax.....																		
Pneumonia.....							2		2		1							
Congestion of the lungs.....							17	25	20	18	56	33	103	102	6	11	4	
Hemorrhage of the lungs.....							1											
Edema of the lungs.....							7	3	4	3	19	8	17	15	5	1	3	
Gangrene of the lungs.....							2		1		1							
Abscess of the lungs.....							1		2		1							
Coryza.....							1						1		1			
Total respiratory diseases.....				1			39	32	31	22	92	57	154	144	9	20	5	
																	3	







TABLE 1.—DEATHS, SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

1879.																				
February.			March.			Total third quarter.			April.			May.			June.			Total fourth quarter.		
W.	C.	F.	W.	C.	F.	W.	C.	F.	W.	C.	F.	W.	C.	F.	W.	C.	F.	W.	C.	F.
M.	F.	M.	M.	F.	M.	F.	M.	F.	M.	F.	M.	M.	F.	M.	F.	M.	F.	M.	F.	M.
2	1				2	1	2	1	1	1	1				1			1	1	1
Gastritis																				
Stomatitis																				
Pharyngitis			1			2		1	1	3		1	2		1	3	1	4	3	1
Gastritis, seritis			1			2									1			1	1	1
Gastritis			1			2	2	1	2	1		1	1		1	1	1	2	1	3
Proctitis																				
Ascaris									1											
Obstruction of intestines.																				
Obstruction of intestines																				
Intestinal hemorrhage																				
Intestinal congestion						2						1	1					1	1	
perforation																				
Hernia, inguinal						1	1													
strangulated																				
Ileus.																				
Colic.						1		1												
Constipation						1	1													
Intussusception			1			1	1	1	1						1			2		
Elevation of stomach						2	1	2	1	1					1			1	1	
Hepatitis																				
Congestion of the liver									1	1								1		
Jandice			1			1									1					
Congestion of the liver																				
Abscess of the liver																				
Atrophy of the liver			1			1							2		1			1	2	1
Amblyosis.																				
Dyspepsia			1			1			1						1					
Gallstones																				
Hæmatemesis																				
Stricture, œsophagus						1														
Fistula																				
Dentition			1	1	3	1	3	2	3	4	1	1			2	1	3	2	2	1
Gastro-intestinal catarrh																				
Congestion of the stomach																		1		
Total digestive diseases	7	3	4	4	4	4	3	3	17	11	10	9	6	3	2	3	4	7	3	3
																		7	17	13
																		13	12	13



TABLE 1.—DEATHS.—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

Cause of death.	AGE OF DECEDENT.																							
	20 to 30 years.				30 to 40 years.				40 to 50 years.				50 to 60 years.				60 to 70 years.				70 to 80 years.			
	W.	F.	C.		W.	F.	C.		W.	F.	C.		W.	F.	C.		W.	F.	C.		W.	F.	C.	
	M.	F.	C.		M.	F.	C.		M.	F.	C.		M.	F.	C.		M.	F.	C.		M.	F.	C.	
CLASS III.—LOCAL DISEASES.																								
Order 4.—Digestive.																								
Gastritis.....									3	1	2	1	2	2	1	1	1							
Stomatitis.....																								
Pharyngitis.....													3	1			1							
Enteritis.....	1								1															
Gastro-enteritis.....									1															
Peritonitis.....		2	1			1		2	2	4		2	2				2				1		1	
Ascites.....													1				1							
Ulceration of intestines.....																								
Obstruction of intestines.....																								
Intestinal hemorrhage.....	1								1															
Intestinal congestion.....																								
Hernia, inguinal.....	1								2	1														
Hernia, inguinal.....									2								1							
Hernia, strangulated.....																								
Hernia.....																								
Colic.....																								
Colic.....																								
Colic.....																								
Intussusception.....									1								1							
Ulceration of stomach.....	1																1							
Hepatitis.....	1								1				3				1				1			
Congestion of the liver.....									2															
Jaundice.....																								
Abscess of the liver.....		1																						
Atrophy of the liver.....									1															
Cirrhosis.....									1				1				1							
Dyspepsia.....																								
Gallstones.....																								
Hæmatemesis.....	1																							
Stricture, œsophagus.....																								
Fistula.....									1															
Dentition.....																								
Gastro-intestinal catarrh.....																								
Congestion of the stomach.....																								
Total digestive diseases.....	6	1	1	2	10	4	1	1	9	11	9	5	13	6	3	1	5	4	2	3	2	6	2	1















TABLE 1.—DEATHS.—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

Cause of death.	AGE OF DECEASED.						SOCIAL RELATIONS.											
	90 to 100 years.			Above 100 years.			Married.			Single.			Widow or widower.			Unknown.		
	W.		C.	W.		C.	W.		C.	W.		C.	W.		C.	W.		C.
	M.	F.		M.	F.		M.	F.		M.	F.		M.	F.		M.	F.	
<b>CLASS III.—LOCAL DISEASES.</b>																		
Order 5.— <i>Urinary system.</i>																		
Nephritis.....																		
Nephria (Bright's disease).....							6		1	4	6	5	3					
Addison's disease.....	1						2	3	4	1	2	1	3	1				
Uremia.....							1						1					
Diabetes.....							1	1	2	1		2						
Enlarged prostate.....							4		1	1		1						
Cystitis.....													1					
Hematuria.....							3		2			1	1					
Renal abscess.....							1		1									
Pyelitis.....							1					1						
Total diseases of the urinary system.....	1						18	5	9	4	8	7	12	5	3	2		3
Order 6.— <i>Generative organs.</i>																		
Ovarian dropsy.....																		
Ovarian tumor.....																		
Metritis.....																		
Menorrhagia.....							1		1			2				1		
Uterine tumor.....							1											
Metropionitis.....							1		2			2				1		
Metropionitis.....							1											
Gangrene of scrotum.....											1							
Total diseases of the generative organs.....							4		3	1		4			1		2	
Order 7.— <i>Locomotor.</i>																		
Caries pelvis and hip joint.....																		
Knee and ankle.....									1			1						
Mollities ossium.....												1						
Total locomotor diseases.....												2			1			

TABLE I.—DEATHS.—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

Cause of death.		RECAPITULATION.												1878.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
		DEATH-RATE.		Total by color and sex.				Total by color.		Total by sex.		Total under 5 years.						Percent of each cause to total mortality.		July.		August.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
		Deaths per 1,000 inhabitants.		W.		C.		W.		C.		W.		C.		W.		C.		W.		C.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
		W.	C.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
CLASS III.—LOCAL DISEASES.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Order 8.—Integumentary.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Abscess, cervical.....		1	.023	.009	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1</





TABLE I.—DEATHS.—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

AGE OF DECEASED.

Cause of death.	Under 1 year.		1 to 2 years.		2 to 3 years.		3 to 4 years.		4 to 5 years.		5 to 10 years.		10 to 20 years.	
	W. C.		W. C.		W. C.		W. C.		W. C.		W. C.		W. C.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
<b>CLASS III.—LOCAL DISEASES.</b>														
Order 8.— <i>Integumentary.</i>														
Abscess, cervical .....														
Cellulitis .....						1								
Ulceration of nates .....							1							
Scleremia .....														
Ecthyma .....		1												
Pelvic abscess .....														
Total integumentary diseases .....		1				1	1							
Total local diseases .....	100	75	191	133	34	28	67	56	19	22	18	27	9	6
<b>CLASS 4.—DEVELOPMENTAL DISEASES.</b>														
Order 1.— <i>Children.</i>														
Premature birth .....	33	24	19	22										
Cyanosis .....	8	2	3	1										
Spina bifida .....	1	1												
Atresia ani .....	2										1			
Unbilical hemorrhage .....	1													
Atelectasis pulmonum .....	1	2	4											
Congenital debility .....	14	10	18	11							1			
Hemophilia .....		1												
Acropalus .....		1												
Total diseases of children .....	60	39	48	36	1						2			
Order 2.— <i>Women.</i>														
Parturition .....														
Periperal convulsions .....														
Phlegmasia dolens .....														



















TABLE 1.—DEATHS.—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

Cause of death.	Total deaths from each cause.	Per cent. of each cause to total mortality.	DEATH-RATE.						RECAPITULATION.												1878.											
			Deaths per 1,000 inhabitants.		Total by color and sex.		Total by color.		Total under 5 years.		Percent of each cause to total mortality.		July.		August.																	
			W.	C.	M.	F.	W.	C.	M.	F.	Total.	W.	C.	M.	F.	Total.	W.	C.	M.	F.	Total.	W.	C.	M.	F.	Total.	W.	C.	M.	F.	Total.	
CLASS V.—VIOLENCE.																																
Order 1.—Accidents and negligence—Continued.																																
Run over by hack street-car.....	1	.023	.009		1		1		1																							
Injury from fall.....	2	.046	.009		1		1		1		2																					
Tetanus from injuries.....	3	.070	.054		3		3		3		3																					
burn.....	1	.023	.018		1		1		1		1																					
Shock from surgical operation.....	1	.023	.018		1		1		1		1																					
fall.....	1	.023	.009		1		1		1		1																					
Scalds.....	6	.139	.044	.018	4	1	1	5	1	4	1	1	1	1	5	6	139															
Burns.....	21	.487	.053	.268	4	2	2	13	6	15	4	1	1	1	5	11	255	1														
Injured by kick of horse.....	2	.046	.018		2		2		2		2																					
Drowning.....	25	.580	.123	.196	14	9	2	14	11	23	2																					
Suffocation.....	1	.023	.018		1		1		1		1																					
overlaid by mother.....	7	.162	.125		7		7		7		7																					
by fire and smoke.....	4	.093	.071		4		4		4		4																					
piece of apple in glottis.....	1	.023	.009		1		1		1		1																					
Gun-shot wound.....	7	.162	.018	.089	2	5	2	5	7																							
Dislocation of neck.....	1	.023	.009		1		1		1		1																					
Concussion of brain.....	3	.070	.018		2	1	2	1	2		2																					
Neglect at birth.....	15	.348	.044	.179	2	3	6	5	10	6	9	2	3	4	6	15	348															
Poisoned by opium.....	3	.070	.009	.036	1	2	1	2	2	1																						
Hemorrhage from radial artery.....	1	.023	.009		1		1		1		1																					
cord, umbilical.....	3	.070	.054		3		3		3		3																					
Compound fracture of forearm.....	1	.023	.009		1		1		1		1																					
Poisoned by podophyllum.....	1	.023	.009	.018	1		1		1		1																					
Exposure.....	1	.023	.009		1		1		1		1																					
Swallowing concentrated lye.....	1	.023	.009		1		1		1		1																					
Total accidents and negligence.....	135	3.133	.535	1.321	42	19	45	29	61	74	87	48	12	9	18	57	1,320	4	2	4	.....	5	2	4	2							

TABLE I.—DEATHS—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

Cause of death.	1878.												1879.							
	September.			Total first quarter.			October.			November.			December.			Total second quarter.			January.	
	W.		C.	W.	C.	W.	C.	W.	C.	W.	C.	W.	C.	W.	C.	W.	C.	W.	C.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
CLASS V.—VIOLENCE.																				
Order 1.—Accidents and negligence—Continued.																				
Run over by hack.....																				
street-car.....																				
Injury from fall.....																				
Tetanus from injuries.....																				
burn.....																				
Shock from surgical operation.....																				
fall.....																				
Scalds.....																				
Burns.....																				
Injured by kick of horse.....																				
Drowning.....																				
Suffocation.....																				
overlaid by mother.....																				
by fire and smoke.....																				
piece of apple in glottis.....																				
Gun-shot wound.....																				
Dislocation of neck.....																				
Concussion of brain.....																				
Neglect at birth.....																				
Poisoned by opium.....																				
Hemorrhage from radial artery.....																				
cord, umbilical.....																				
Compound fracture of forearm.....																				
Poisoned by podophyllum.....																				
Exposure.....																				
Swallowing concentrated lye.....																				
Total accidents and negligence.....																				



TABLE I.—DEATHS.—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

1879.																										
February.			March.			Total third quarter.			April.			May.			June.			Total fourth quarter.								
W.	C.		W.	C.		W.	C.		W.	C.		W.	C.		W.	C.		W.	C.							
M.	F.		M.	F.		M.	F.		M.	F.		M.	F.		M.	F.		M.	F.							
CLASS V.—VIOLENCE.																										
Order 1.—Accidents and negligence—Continued.																										
Run over by hack, street-car																										
	1							1		1																
Injury from fall																										
	2							2																		
Tetanus from injuries																										
								1		1																
burn																										
								1		1																
Shock from surgical operation																										
1																										
fall																										
								1	1	1	2	6														
Scalds																										
								1	1	1	1	2	6													
Burns																										
1	3																									
Injured by kick of horse																										
drowning																										
Smothering																										
Smothering																										
2	2																									
overlaid by mother																										
by fire and smoke																										
piece of apple in glottis																										
Gunshot wound																										
Dislocation of neck																										
Concussion of brain																										
Neglect at birth																										
Poisoned by opium																										
Hemorrhage from radial artery																										
cord, umbilical																										
Compound fracture of forearm																										
1																										
Poisoned by podophyllum																										
Exposure																										
Swallowing concentrated lye																										
Total accidents and negligence																										
1	2	6	5	1	1	5	4	6	4	17	14	3			1	5	3	4	6	1	5	3	14	4	9	4

TABLE I.—DEATHS—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

Cause of death.		AGE OF DECEDENT.																									
		Under 1 year.			1 to 2 years.			2 to 3 years.			3 to 4 years.			4 to 5 years.			5 to 10 years.			10 to 20 years.							
		W.	M.	C.	W.	M.	C.	W.	M.	C.	W.	M.	C.	W.	M.	C.	W.	M.	C.	W.	M.	C.					
		M.	F.	M.	F.	M.	C.	W.	M.	F.	M.	C.	W.	M.	F.	M.	C.	W.	M.	F.	M.	C.	F.	M.	F.	M.	C.



TABLE I.—DEATHS.—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

Cause of death.		AGE OF DECEDENT.						SOCIAL RELATIONS.									
		90 to 100 years.			Above 100 years.			Married.			Single.			Widow or widower.			Unknown.
		W.		C.	W.		C.	W.		C.	W.		C.	W.		C.	
		M.	F.	M.	M.	F.	M.	M.	F.	M.	M.	F.	M.	M.	F.	M.	F.
<b>CLASS V.—VIOLENCE.</b>																	
<b>Order 1.—Accidents and negligence—Continued.</b>																	
Run over by hack.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Injury from fall.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tetanus from injuries.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
burn.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shock from surgical operation.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
fall.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scalds.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Burns.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Injured by kick of horse.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Drowning.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Suffocation.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
overland by mother.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
by fire and smoke.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
piece of apple in gottis.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gunshot wound.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dishwater in neck.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Concussion of brain.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Neglect at birth.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Poisoned by opium.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hemorrhage from radial artery.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
cord, umbilical.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Compound fracture of fore-arm.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Poisoned by podophyllum.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Exposure.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Swallowing concentrated lye.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total accidents and negligence.....	1	.....	.....	.....	.....	.....	.....	11	1	8	1	28	14	35	27	1	2

TABLE I.—DEATHS—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

Cause of death.	DEATH-RATE.										RECAPITULATION.										1878.															
	Total deaths from each cause.					Total by color and sex.					Total by sex.					Total under 5 years.					Per cent. of each cause to total mortality.					July.					August.					
	Deaths per 1,000 inhabitants.					Total by sex.					Total by color.					Total under 5 years.					Per cent. of each cause to total mortality.					July.					August.					
	Per cent. of each cause.					Total by sex.					Total by color.					Total under 5 years.					Per cent. of each cause to total mortality.					July.					August.					
	W.	C.	M.	F.	C.	W.	C.	M.	F.	C.	W.	C.	M.	F.	C.	W.	C.	M.	F.	C.	W.	C.	M.	F.	C.	W.	C.	M.	F.	C.	W.	C.				
<b>CLASS V.—VIOLENCE.</b>																																				
Order 3.— <i>Homicide.</i>																																				
Incised wound.....	1	.023	.008	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Gunshot wound.....	1	.023	.009	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Punctured wound, pericardium.....	1	.023	.018	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
peritoneum.....	1	.023	.018	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Abortion.....	1	.023	.009	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Infanticide, fracture of skull.....	1	.023	.018	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
strangled with cord.....	1	.023	.018	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
necktie.....	1	.023	.018	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Total homicide.....	8	.186	.018	107	2	3	3	2	6	5	3	1	1	1	1	3	.069	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
Order 4.— <i>Suicide.</i>																																				
Incised wound of throat.....	2	.046	.018	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Arsenic.....	1	.023	.009	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Gunshot wound of head.....	2	.046	.018	2	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Jumping from building.....	1	.023	.009	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
By laudanum.....	1	.023	.009	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Total suicide.....	7	.162	.061	4	3	7	7	4	3	7	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4	
Total deaths by violence.....	150	3.481	.614	1,428	48	22	48	32	70	80	96	54	13	9	19	60	1.389	4	2	4	6	2	4	6	2	4	6	2	4	6	2	4	6	2	4	
Unknown.....	2	.046	.009	.018	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
<b>RECAPITULATION.</b>																																				
I. Zymotic diseases.....	993	23.04	4.982	7,589	282	286	214	211	568	425	496	497	160	188	170	164	682	15.83	27	38	47	50	27	28	38	47	50	27	28	38	47	50	27	28	38	
II. Constitutional diseases.....	1,109	25.74	4.807	10,018	247	301	248	313	548	561	495	614	36	42	93	84	255	3.92	19	31	18	43	23	30	24	37	19	31	18	43	23	30	24	37		
III. Local diseases.....	1,659	38.50	7.070	15,232	407	339	454	399	806	853	921	738	169	141	291	236	837	13.42	44	37	32	36	34	19	37	44	37	32	36	34	19	37	44	37		
IV. Developmental diseases.....	396	9.19	1.781	3,447	85	118	86	107	263	193	146	225	63	58	66	56	186	2.82	15	12	9	13	12	6	12	15	12	9	13	12	6	12	15	12		
V. Violence.....	133	3.48	.614	1,428	48	22	48	32	70	80	96	54	13	9	19	60	1.38	4	2	4	6	2	4	6	2	4	6	2	4	6	2	4	6	2	4	
Unknown.....	2	.046	.009	.018	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Grand total.....	4,309	100.00	19,263	37,732	1,130	1,066	1,051	1,062	2,196	2,132	1,812	1,284	441	419	621	539	2,029	46.88	105	117	109	142	93	108	107	117	105	117	109	142	93	108	107	117		

TABLE 1.—DEATHS.—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

Cause of death.	1878.												1879.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	Total first quarter.						October.						November.						December.						Total second quarter.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	W.		C.		M.		F.		M.		F.		W.		C.		M.		F.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.		F.		W.		C.		M.

TABLE I.—DEATHS—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

Cause of death.	1879.																		Total fourth quarter.									
	February.			March.			Total third quarter.			April.			May.			June.			W.	C.	F.	M.	F.	M.	F.	C.		
	W.	C.	F.	W.	C.	F.	W.	C.	F.	W.	C.	F.	W.	C.	F.	W.	C.	F.									W.	C.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
CLASS V.—VIOLENCE.																												
Order 3.— <i>Homicide.</i>																												
Incised wound.....																												
Gunshot wound.....																												
Punctured wound, pericardium.....																												
Punctured wound, peritoneum.....																												
Abortion.....																												
Infanticide, fracture of skull.....																												
Infanticide, strangled with cord.....																												
Infanticide, necktie.....																												
Total homicide.....	1				1			1			1		2															
Order 4.— <i>Suicide.</i>																												
Incised wound of throat.....																												
Arsenic.....																												
Gunshot wound of head.....	1								1																			
Jumping from building.....																												
By laudanum.....																												
Total suicide.....	1								1				2															
Total deaths by violence.....	2	2	7	5	1	1	6	4	8	4	19	14	3				1	5	3	4	2							
Unknown.....																												
RECAPITULATION.																												
I. Zymotic diseases.....	20	17	8	10	17	12	9	11	58	48	27	24	12	21	9	9	19	13	10	11	51	50	32	38	22	81	51	56
II. Constitutional diseases.....	18	29	19	24	24	25	31	24	75	68	61	74	20	31	27	21	21	14	22	23	34	32	34	37	25	57	27	46
III. Local diseases.....	42	27	46	40	48	33	53	46	147	80	142	127	39	31	42	36	36	27	32	30	34	34	37	105	89	111	40	
IV. Developmental diseases.....	7	6	5	10	7	12	7	6	22	37	20	25	9	10	8	5	1	5	3	4	2	8	4	7	23	23	19	18
V. Violence.....	2	2	7	5	1	1	6	4	8	4	19	14	3				1	5	3	4	2	6	2	5	3	14	5	9
Unknown.....																												
Grand total.....	80	72	85	89	97	83	106	91	310	243	269	294	83	93	86	72	74	74	78	70	122	99	103	110	279	276	297	292









TABLE I.—DEATHS.—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

SEX AND COLOR, MONTHS AND QUARTERS.										RECAPITULATION.										1878.						
Cause of death.	Total deaths from each cause.	DEATH-RATE.			Total by color and sex.			Total by color.			Total under 5 years.			Per cent. of each cause to total mortality.			July.			August.						
		Deaths per 1,000 inhabitants.			Total by sex.			Total by color.			Total by sex.			Per cent. of each cause to total mortality.			W. C.			W. C.						
		W.	C.		W.	F.		W.	F.	C.	M.	F.		W.	F.	E.	M.	F.	M.	F.	E.	M.	F.	E.		
I. { Miasmatic diseases	887	20.59	4.570	6.536	263	258	187	179	521	306	450	437	146	166	144	134	500	13.691	25	37	43	46	25	25	36	32
{ Eruptive diseases	790	1.86	.088	.179	5	5	3	7	10	10	8	12	1	2	3	5	11	.256	1	3	4	2	3	2	1	1
{ Diabetic diseases	70	1.83	.298	.804	13	21	22	23	3	3	34	45	35	44	12	18	21	74	1.717	2	1	3	4	2	3	2
{ Parasitic diseases	7	1.16	.026	.070	1	1	2	2	3	4	1	1	1	1	2	2	6	.162	5	10	3	1	4	2	1	
II. { Zymotic diseases	174	4.04	.895	1.286	33	69	28	44	102	72	61	113	35	41	87	84	247	1.180	14	21	13	12	19	20	24	
{ Typhoid diseases	945	21.70	3.912	5.732	214	232	229	269	446	269	434	434	269	373	69	124	99	347	5.722	14	21	13	12	19	20	24
{ Diseases of the nervous system	586	13.46	2.465	3.339	160	121	167	122	283	203	327	253	73	69	124	99	347	8.052	25	18	15	15	13	14	22	
{ Diseases of the circulatory system	139	3.23	.781	.893	39	30	25	25	89	39	84	55	4	1	1	1	1	1	162	5	6	7	8	7	10	8
{ Respiratory diseases	624	14.48	2.210	6.645	143	109	160	182	252	180	372	333	291	63	54	133	124	371	8.080	11	7	2	3	6	9	6
{ Digestive diseases	213	4.94	1.140	1.482	72	58	47	36	130	83	119	94	26	22	26	18	92	2.135	11	7	2	3	6	9	6	
{ Diseases of the urinary system	76	1.76	.357	.589	29	14	21	12	43	33	40	10	2	3	6	2	13	.202	3	1	2	1	4	3	1	
{ Diseases of the generative organs	15	.35	.053	.070	1	5	2	2	9	6	9	14	2	3	6	2	13	.202	3	1	2	1	4	3	1	
III. { Locomotor diseases	4	.09	.044	.054	3	2	2	1	5	3	5	3	1	1	1	1	1	.023	1	1	2	1	1	1	1	2
{ Integumentary diseases	186	4.32	.895	1.209	63	39	48	36	102	84	111	75	63	39	48	36	186	4.315	10	1	1	5	7	4	5	
{ Diseases of children	43	1.00	.302	.357	23	23	20	23	20	23	43	55	102	43	55	102	43	1	8	5	2	4	4	1	1	
{ Diseases of women	157	3.64	.623	1.536	18	53	37	49	71	86	55	102	43	55	102	43	55	1	8	5	2	4	4	2	10	
IV. { Old age	10	.23	.061	.054	4	3	1	2	7	3	5	5	5	5	5	5	5	1	5	2	4	5	2	4	2	
{ Nutrition	135	3.13	.535	1.321	42	19	45	29	61	74	87	48	12	9	18	18	57	1.320	4	2	4	5	2	4	2	
{ Accidents and negligence	8	.19	.018	.107	2	3	3	3	6	6	4	3	1	1	1	1	3	.069	1	1	1	1	1	1	1	
V. { Homicide	7	.16	.061	.018	4	3	1	1	7	1	2	3	3	1	1	1	3	1	1	1	1	1	1	1	1	
{ Suicide	2	.05	.009	.018	1	1	1	1	1	1	2	3	3	1	1	1	3	1	1	1	1	1	1	1	1	
Unknown	4,300	100	19,263	37,732	1,130	1,066	1,051	1,062	2,196	2,113	2,181	2,128	441	419	621	539	2,029	46.88	105	117	109	142	93	108	107	
Grand total from all causes by sex					2,196	2,113							860	1,160					222	251	201	224				
Grand total from all causes by color					50.963	49.037							19.96	26.92					5.15	5.83	4.67	5.20				
Percentage from all causes by color in each period of life to total mortality					19.263	37.732							7.54	20.71					1.95	4.48	1.76	4.00				
Rate of deaths per 1,000 inhabitants (white and colored)					12.92	12.43							5.06	6.82					1.31	1.48	1.18	1.32				
Death-rate per 1,000 inhabitants (total)	25.347																									

# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 247

TABLE I.—DEATHS.—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

C. cause of death.	1878.												1879.																
	September.				Total first quarter.				October.				November.				December.				Total second quarter.				January.				
	W.		C.		W.		C.		W.		C.		W.		C.		W.		C.		W.		C.		W.		C.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	C.
I. { Miasmatic diseases Etiotic diseases Dietic diseases Parasitic diseases	20	16	21	14	70	78	100	92	27	30	14	15	19	13	4	6	17	21	5	3	63	64	23	24	20	17	9	3	
	1	2	1	1	1	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	2	1	1	1	4	6	6	6																					
II. { Diphtheritic diseases Tubercular diseases Diseases of the nervous system Chorea Respiratory diseases Zoonotic diseases	17	16	17	27	50	65	52	93	12	22	11	16	17	25	12	13	22	16	20	15	51	53	7	18	3	10	2	3	
	6	7	11	5	41	38	47	45	11	9	15	12	16	8	9	7	14	6	18	10	41	23	42	29	18	15	13	11	
	5	2	1	1	8	8	2	9	8	2	1	4	1	1	2	8	5	5	3	20	6	8	6	5	1	2	4		
III. { Digestive diseases Diseases of the urinary system Diseases of the female system Diseases of the generative organs Locomotor diseases	4	7	2	1	21	22	10	5	8	7	4	3	4	2	7	4	5	3	4	2	17	12	13	34	39	24	15	22	23
	2	1	1	1	6	5	4	2	1	1	1	1	1	1	1	3	1	2	1	5	1	3	9	2	3	3	1	1	
	1	2			2	2	4	1				1			1		1	1			1	2							
IV. { Integumentary diseases Diseases of children Diseases of women Old age	2	8	9	3	19	12	14	13	3	2	2	2	3	1	7	2	3	2	2	2	9	5	11	6	5	5	4	3	
	2	3	1	3	5	15	11	18		6	3	3	1	1	3						5	5	5	5	5	4	3	2	
	2	3	1	3	5	15	11	18		6	3	3	1	1	3						5	5	5	5	5	4	3	2	
V. { Accidents and negligence Homicide Suicide Unknown	3	1	1	2	12	5	9	4	4	4	4	1	1	1	1	4	5	1	5	3	10	6	10	7	4	1	6	5	
	1				1		1		1			1	1	1	1	1		1		2	2								
Grand total from all causes by sex.	73	83	77	70	271	308	293	329	89	96	70	76	85	70	69	72	96	73	83	69	270	269	222	217	124	88	78	84	
Grand total from all causes by color.	156		147		579	622			185	146			155		141		169		152		500		439		212		162		
Percentage from all causes by color in each period of life to total mortality.	3.62		3.41		13.44	14.44			4.29	3.39			3.60		3.27		3.92		3.53		11.81		10.19		4.92		3.76		
Rate of deaths per 1,000 inhabitants (white and colored).	1.37		2.62		5.08	11.10			1.62	2.61			1.36		2.52		1.48		2.71		4.64		7.84		1.86		2.89		
Death-rate per 1,000 inhabitants (total).	.92		.86		3.41	3.66			1.09	.86			.91		.83		.99		.89		2.99		2.58		1.25		.95		



TABLE I.—DEATHS.—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLORE, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

Cause of death.		AGE OF DECEASED.															
		Under 1 year.				1 to 2 years.				2 to 3 years.				3 to 4 years.			
		W.	M.	F.	C.	W.	M.	F.	C.	W.	M.	F.	C.	W.	M.	F.	C.
I. { Miasmatic diseases.....		66	70	80	84	30	42	36	33	19	22	13	8	15	14	5	2
{  Enthetic diseases.....		1	2	1	3	2	5	3	1	1	1	1	1	1	1	1	1
{  Dietic diseases.....		12	16	15	20	2	5	3	1	1	1	1	1	1	1	1	1
{  Parasitic diseases.....		1	2	1	2	1	2	1	1	1	1	1	1	1	1	1	1
II. { Diathetic diseases.....		22	29	25	39	8	9	31	20	1	2	1	1	1	7	4	1
{  Tubercular diseases.....		50	38	98	71	14	11	16	10	3	5	5	6	3	4	6	13
{  Diseases of the nervous system.....		33	24	72	52	15	10	39	41	9	13	13	16	3	1	5	8
{  Respiratory diseases.....		16	13	3	9	5	7	9	5	3	2	1	2	1	1	3	3
{  Digestive diseases.....		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
{  Diseases of the urinary system.....		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
{  Diseases of the reproductive organs.....		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
{  Locomotor diseases.....		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
{  Integumentary diseases.....		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
{  Diseases of children.....		60	39	48	36	1	1	1	1	1	1	1	1	1	1	1	1
{  Diseases of women.....		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IV. { Old age.....		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
{  Nutrition.....		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
{  Accidents and negligence.....		4	3	13	11	3	4	2	2	3	1	3	1	2	1	1	5
V. { Homicide.....		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
{  Suicide.....		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
{  Unknown.....		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Grand total from all causes by sex.....		267	236	374	329	76	85	146	115	42	45	54	46	30	28	27	30
Grand total from all causes by color.....		503	703	161	261	87	100	58	57	51	39	134	98	105	83	1.93	1.48
Percentage from all causes by color in each period of life to total mortality.....		11.68	16.32	3.74	6.06	2.02	2.32	1.35	1.32	1.18	.91	3.11	2.27	2.44	1.93	1.48	.49
Rate of deaths per 1,000 inhabitants (white and colored).....		4.41	12.55	1.42	4.66	.76	1.79	.51	1.04	.45	.70	1.18	1.75	.92	1.48	.62	.49
Death-rate per 1,000 inhabitants (total).....		2.96	4.13	.95	1.53	.51	.59	.34	.33	.30	.23	.79	.58	.62	.49	.49	.49

TABLE 1.—DEATHS.—SHOWING TOTAL NUMBER OF DEATHS OCCURRING IN THE DISTRICT OF COLUMBIA, ARRANGED BY CLASSES AND ORDERS, SEX AND COLOR, MONTHS AND QUARTERS, WITH PERCENTAGES AND DEATH-RATES, FOR THE YEAR ENDING JUNE 30, 1879.

Cause of death.	AGE OF DECEASED.											
	20 to 30 years.			30 to 40 years.			40 to 50 years.			50 to 60 years.		
	W.	C.	C.	W.	C.	C.	W.	C.	C.	W.	C.	C.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
I. { Miasmatic diseases	7	9	12	2	9	8	5	8	8	5	4	11
I. { Enthetic diseases	1	1	1	1	1	1	2	2	2	1	1	1
I. { Parasitic diseases	1	2	1	3	2	11	3	7	3	14	5	8
II. { Diabetic diseases	45	54	43	45	43	29	26	14	16	19	18	14
II. { Tubercular diseases	2	8	2	1	19	5	6	21	9	5	3	9
II. { Diseases of the nervous system	5	4	8	10	7	11	13	17	8	4	1	9
II. { Circulatory diseases	1	1	1	2	10	4	1	1	9	15	11	7
II. { Respiratory diseases	6	1	1	2	10	4	1	1	9	15	11	7
III. { Digestive diseases	1	2	3	1	4	2	2	1	5	3	3	2
III. { Diseases of the urinary system	1	2	3	1	4	2	2	1	5	3	3	2
III. { Diseases of the generative organs	1	2	3	1	4	2	2	1	5	3	3	2
III. { Locomotor diseases	1	2	3	1	4	2	2	1	5	3	3	2
III. { Degenerative diseases	1	2	3	1	4	2	2	1	5	3	3	2
IV. { Diseases of children	8	12	12	4	3	2	2	2	8	5	2	10
IV. { Diseases of women	1	1	1	1	1	1	1	1	1	1	1	1
V. { Nutrition	2	4	3	3	2	6	1	1	2	5	3	1
V. { Accidents and negligence	1	1	2	2	1	1	1	1	1	1	1	1
V. { Homicide	2	2	2	2	1	1	1	1	1	1	1	1
V. { Suicide	2	2	2	2	1	1	1	1	1	1	1	1
V. { Unknown	1	1	1	1	1	1	1	1	1	1	1	1
Grand total from all causes by sex	74	96	81	103	104	105	57	91	118	88	47	51
Grand total from all causes by color	170	184	209	149	206	98	98	168	43	164	89	109
Percentage from all causes by color in each period of life to total mortality	3.95	4.27	4.85	3.46	4.78	2.27	3.90	2.16	3.81	2.07	2.53	1.81
Rate of deaths per 1,000 inhabitants (white and colored)	1.49	3.28	1.83	2.66	1.81	1.77	1.47	1.66	1.44	1.59	.96	1.39
Death-rate per 1,000 inhabitants (total)	1.00	1.08	1.23	.88	1.21	.58	.99	.55	.96	.52	.64	.46





In making the estimate for Table II, the white and colored population has been divided between the sexes as follows: White males, 57,798; white females, 56,202; colored males, 27,462; colored females, 28,538. The number of the two races and their sexes have also been estimated according to the different periods of life; the number 5 years of age and over, 20 years and over, and 40 years and over.

These estimates are based on the proportions of the sexes in the two races at these different periods of life, as given by tables of the last census. The proportion of total white population to population 5 years of age and over, was as 1 to .859485, or in 1,000, 859 would have arrived at this age; for 20 years of age and over, the proportion was as 1 to .5082, or in 1,000, 508 would be 20 years of age; for 40 years of age and over, the proportion was as 1 to .203677, or in 1,000, 204 would be 40 years of age.

For the colored, these proportions were total population to population 5 years of age and over as 1 to .83782, or in 1,000, 838 would be 5 years of age and over; for 20 years of age, the proportion was as 1 to .463707, or in 1,000, 464 would be 20 years of age and over; for 40 years of age, the proportion was as 1 to .17242, or in 1,000, 172 would be 40 years of age and over.

For the total white population of the country at that time, the proportion of the sexes were 507 males to 493 females in 1,000; and this proportion was the same for those 5 years of age and over; of 20 years of age and over, there were 509 males to 491 females in 1,000; of 40 years of age and over, there were 525 males to 475 females in 1,000; showing a gradual increase of the males and decrease of females up to this latter period of life. Of the colored population, the proportions of the sexes for the total number were 490 males and 510 females in 1,000; of 5 years of age and over, 488 males and 512 females in 1,000; of 20 years of age and over, 479 males and 521 females in 1,000; of 40 years of age and over, 502 males and 498 females in 1,000. It appears by these figures that the relations of the sexes of the two races are not the same, for whereas the white males are continually increasing in number up to the 40th year, the colored males are less than the colored females, and continue to grow less till after the age of 20; and then their number does not exceed that of their females till near the 40th year, and at this time the number of males is only 4 in the 1,000 more than females.

Some reason for this disproportion of the sexes of the colored race may perhaps be found in the different average ages shown in the division of this table. Under "All ages," the average age of the colored male is shown to be but 17.42 years, while that of the colored female is 20.84; a difference in favor of the latter of 3.42 years. The average age of white male decedent is but .06 of a year less than the white female, and 9 years greater than the colored male; the average of the white female being 5.64 above the colored female. The average age of the white race of both sexes is 7.31 years greater than that of the colored.

The death-rate by race and sex as here given is also interesting. The annual death-rate per 1,000 of the white males is 19.555; white females, 18.963; colored males, 38.271; and colored females, 37.214. The rate for the males being highest in both races, in the white race the excess is .592; in the colored, 1.057; the latter nearly double that of the former. It is also shown that the rate of the colored for each sex, as well as for the total, is very nearly double that of the white. The annual death-rate per 1,000 for the total population is 25.347; the rate of the white race being but 19.263, while that of the colored is 37.732.

Of the total mortality, the white males furnished 26.224 per cent.; white

females, 24.739 per cent.; colored males, 24.391 per cent.; and colored females, 24.646 per cent. Before arriving at five years of age, however, many changes, it will be seen, have taken place in our figures. The total population has decreased from 170,000 to 144,899; the white population from 114,000 to 97,981; the colored from 56,000 to 49,037; the white males from 57,798 to 49,676; white females from 56,202 to 48,305; the colored males from 27,462 to 22,910; and the colored females from 28,538 to 24,008.

The following are the number and percentages of the different sexes and races under 5 years of age: White males, 8,122, or 14.09 per cent. to total number; white females, 7,897, or 14.05 per cent.; colored males, 4,552, or 16.58 per cent.; and colored females, 4,530, or 16.22 per cent. Out of the 4,309 decedents, 2,289, or 53.12 per cent., arrived at the age of 5 years, and 2,020, or 46.88 per cent., were under 5 years of age.

Of the white decedents, out of a total mortality of 2,196, 1,336, or 60.83 per cent., arrived at the age of 5 years, and 860, or 39.17 per cent., were under 5 years of age; of the colored, out of a total mortality of 2,113, 953, or 45.10 per cent., arrived at 5 years, and 1,160, or 54.90 per cent., were under 5 years of age. A little over 59 per cent. of the colored males were under 5 years of age. The average ages of the decedents who arrived at this age (viz, 5 years) have greatly improved. That of the whites has increased over 16 years each; of the colored, the males have lengthened their average ages from 17.42 to 41.12 years or 23.70 years, and the colored females from 20.84 years to 41.25 or 20.41 years; the whites still being about one and one-half years ahead. We do not here (under the division of the table "Five years and over") find that marked difference in the annual death rate; that of the white population being 13.63, the male being nearly one-half of one to the 1,000 greater than the female; the colored, 20.31; so that although the death rate among the whites has decreased from 19.262 to 13.63, the colored have decreased their death rate from 37.732 to 20.31. Of the 53.12 per cent. of the total number of decedents of 5 years of age and over, the white population furnishes 31 per cent. and the colored 22.12.

Arriving at the next stage in the table, that treating of the living population and decedents who have arrived at 20 years of age, it is found that very many changes have again taken place, the white population being 40,046 less than at 5 years of age; a shrinkage of 40.88 per cent. during the 15 years passed over. The colored population for the same time has decreased 20,951, or 44.65 per cent. Nearly one-half of the white decedents arrived at this age, and but 36.58 per cent. of the colored, the average ages for each sex and color having advanced about 7 years. The annual death rate per 1,000 has increased 5.3 for the white and 9.42 for the colored. The percentage to total mortality for the white has fallen 5.54 and for the colored 4.2.

Passing to the next division, those 40 years of age and over, the white population is found to have decreased over one-half in the past 20 years, and the colored 62.82 per cent.; 32.7 per cent. of the total white mortality was of this age, and but 20.78 per cent. of the colored. The annual death rate per 1,000 for the white population of this age was 30.92 and for the colored 45.47; and the percentage of the total mortality was for the whites 16.66, and for the colored but 10.19. Somewhat of a change has taken place here in regard to the average ages of the decedents, the colored being in advance.

Of the total (1,130) decedent white males, 384 arrive at the age of 40; or out of 1,000 births, 340 would arrive at this age; of the total (1,066) decedent white females, 334 arrive at this age, or 314 in every 1,000 births; or

the total (1,051) decedent colored males, 209 arrive at this age, or 199 in 1,000 births; of the total (1,062) decedent colored females, 230 arrive at this age, or 217 in 1,000 births. This gives the white males the advantage of 141 in 1,000 over the colored males on arriving at the age of 40, and the white females an advantage of 97 over the colored.

Under social relations, the widows are found to outnumber the widowers more than two to one among the white decedents, and more than three to one among the colored; and her average age is also in excess of his.

The next division of this part of the table, under the head "Married," reverses these figures, and although 324 married men and but 242 married women were among the white decedents, the life of the former is found to exceed that of the latter, and a similar condition appears among the colored race. The age of the single white female is about one year in excess of the single white male.

The annual death-rate per 1,000 for each race and sex under 5 years of age is as follows: White males, 54.29; white females, 53.06; colored males, 136.42; and colored females, 119. For the whites, the male and female combined, the rate is 53.68, and for the colored 127.72, the colored being in excess 74.04. For total population the rate is 80.47 per 1,000. This terrible death rate of the colored children is largely the result of the manner in which they live and the care they bestow upon their offspring.

Between the ages of 5 and 20 the following gives the estimated population for each race and sex, the total deaths for the same period, with annual death-rate per 1,000: White male population 20,187, deaths 127, rate 6.29; white female population 19,859, deaths 112, rate 5.64; total white population 40,046, deaths 239, rate 5.97; colored male population 10,477, deaths 82, rate 7.83; colored female population 10,474, deaths 99, rate 9.45; total colored population 20,951, deaths 181, rate 8.64.

Between the ages of 20 and 40 years we have the following: White males 17,299, deaths 178, rate 10.29; white female population 17,417, deaths 201, rate 11.54; total white population 34,716, deaths 379, rate 10.92; colored male population 7,587, deaths 138, rate 18.19; colored female population 8,725, deaths 194, rate 22.23; total colored population 16,312, deaths 332, rate 20.35.

The table gives the estimated population, deaths, and rate for 40 years and over:

TABLE II.—DEATHS.—Showing total number of deaths, by color and sex, with population estimated for different periods of life, average ages of decedents, the number of widows and widowers, married and single, of and above the age of twenty years, percentages to total mortality, and annual death-rates per 1,000 of each class at different periods of life, for the year ending June 30, 1879.

Color and sex.	All ages.					Five years and over.					
	Estimated popu- lation.	Total deaths.	Average ages.	Death-rate per 1,000 of each class.	Percentage to to- tal mortality.	Estimated popu- lation.	Total deaths.	Average ages.	Percentage to to- tal mortality of each class.	Death-rate per 1,000 of each class.	Percentage to to- tal mortality.
White males .....	57,798	1,130	26.42	19.551	26.224	49,676	689	42.52	60.97	13.87	15.99
White females .....	56,202	1,096	26.48	18.967	24.739	48,305	647	42.84	60.69	13.39	15.01
Total white .....	114,000	2,196	26.45	19.263	50.963	97,981	1,336	42.67	60.83	13.63	31.00
Colored males .....	27,462	1,051	17.42	38.271	24.391	22,910	430	41.12	40.91	18.77	9.98
Colored females .....	28,538	1,062	20.84	37.214	24.646	24,008	523	41.25	49.25	21.78	12.14
Total colored .....	56,000	2,113	19.14	37.732	49.037	46,918	953	41.19	45.10	20.31	22.12
Total white and colored .....	170,000	4,309	22.86	25.347	100.000	144,899	2,289	42.07	.....	15.80	53.12

TABLE II.—DEATHS.—Showing total number of deaths, by color and sex, &amp;c.—Continued.

Color and sex.	Twenty years and over.						Forty years and over.					
	Estimated popu- lation.	Total deaths.	Average ages.	Percentage to to- tal mortality of each class.	Death-rate per 1,000 of each class.	Percentage to to- tal mortality.	Estimated popu- lation.	Total deaths.	Average ages.	Percentage to to- tal mortality of each class.	Death-rate per 1,000 of each class.	Percentage to to- tal mortality.
White males.....	29,489	562	49.69	49.73	19.06	13.04	12,190	384	58.21	32.99	31.50	8.91
White females.....	28,446	535	49.64	50.19	18.81	12.32	11,029	334	61.44	31.34	30.28	7.75
Total white.....	57,935	1,097	49.66	49.95	18.93	25.46	23,219	718	59.75	32.70	30.92	16.66
Colored males.....	12,433	348	48.70	33.11	27.99	8.08	4,846	299	60.90	19.89	43.13	4.85
Colored females.....	13,534	424	48.35	39.93	31.33	9.84	4,809	220	64.51	21.66	47.82	5.34
Total colored.....	25,967	772	48.33	36.58	29.73	17.92	9,655	439	62.84	20.78	45.47	10.19
Total white and colored.....	83,902	1,869	49.12	.....	22.28	43.38	32,874	1,157	60.83	.....	35.19	26.85

TABLE II.—DEATHS.—Showing total number of deaths, by color and sex, &amp;c.—Continued.

Color and sex.	SOCIAL RELATIONS OF AND ABOVE TWENTY YEARS.											
	Widows and widowers.				Married.				Single.			
	Total deaths.	Average ages.	Percentage of total mortality of each class.	Percentage to total mortality.	Total deaths.	Average ages.	Percentage of total mortality of each class.	Percentage to total mortality.	Total deaths.	Average ages.	Percentage to total mortality of each class.	Percentage to total mortality.
White males.....	70	64.78	6.20	1.62	324	51.39	28.67	7.52	158	40.17	13.99	3.67
White females.....	183	63.64	17.17	4.25	242	41.40	22.70	5.61	110	41.16	10.32	2.55
Total white .....	253	65.39	11.53	5.87	566	47.12	25.80	13.13	268	40.58	12.20	6.22
Colored males.....	52	62.82	4.95	1.21	203	51.13	19.32	4.71	90	33.47	8.57	2.09
Colored females.....	181	63.43	17.04	4.20	173	37.59	16.29	4.02	67	29.99	6.31	1.55
Total colored .....	233	64.87	11.03	5.41	376	44.90	17.79	8.73	157	31.99	7.43	3.64
Total white and colored.....	486	65.15	.....	11.28	942	46.23	.....	21.86	425	37.64	.....	9.86

Table III was compiled to show the nativity, age, and duration of residence of the white decedents for the past year, and also certain information regarding those who died of phthisis pulmonalis or consumption, pneumonia, and cancers. As will be seen by the note below the table, there were 67 cases that could not be tabulated in this way on account of failure of the certificate to give the required data. Of the total number of deaths (2,196) 1,203, or 54.78 per cent., were natives of this District; 46, or 2.09 per cent., of the New England States; 158, or 7.19 per cent., of the Middle States; 358, or 16.30 per cent., of the two Virginias and Maryland; 87, or 3.96 per cent., of all other parts of the United States; 164, or 7.47 per cent., of Ireland; 41, or 1.87 per cent., of England, Scotland, and Wales; 100, or 4.55 per cent., of Germany; and 36, or 1.64 per cent., of all other countries. Combining all the decedents whose nativity is given either in the table or note, there are 54.78 per cent. natives of this District, 29.54 per cent. of other parts of the United States, and 15.53 per cent. natives of foreign countries, the total percentage of those who were not natives of the District being 43.49; of the 990 decedents not natives of this District, 132, or 13.33 per cent. of them, and 6.01 per cent. of the white decedents were residents of this District less than one year, and some less than one day, making a death rate of 1.158 per 1,000 for the white population; 135, or 13.64 per cent., of those born outside the District resided here between one and five years; 109, or 11.01 per cent., between five and ten years; 550, or 55.56 per cent., ten years and over. Of the total number *tabulated*, 849, or 39.78 per cent., were under 5 years of age; 144 between 5 and 10; 99 between 10 and 20; 160 between 20 and 30; 198 between 30 and 40; and 679, or 31.89 per cent., 40 and over. Of phthisis pulmonalis, 343 cases are tabulated; pneumonia, 146; cancers, 54; and of all other diseases, 1,586. Of the whole number of cases of phthisis, 125, or 34.91 per cent., were natives of the District; 11, or 3.08 per cent., of New England; 39, or 10.9 per cent., of the Middle States; 83, or 23.18 per cent., of Virginia and Maryland; 23, or 6.42 per cent., of other parts of the United States; 36, or 10.06 per cent., of Ireland; 9, or 2.51 per cent., of England, Scotland, and Wales; 18, or 5.03 per cent., of Germany; and 14, or 3.91 per cent., of all other foreign countries. Condensing, we find 125, or 34.91 per cent., natives of the District; 156, or 43.58 per cent., of other parts of the United States; and 77, or 21.51 per cent., of foreign countries.

Comparing these percentages with those of all the decedents from each of these localities and the nations to the total deaths (the three whose nativities are not given are excluded from this and all other calculations), we have, perhaps, some evidence of amount of predisposition to this disease in different nationalities. The evidence furnished by these figures may be slight, but it is worth considering.

## NATIVITIES.

	District of Columbia.	New England.	Middle States.	Maryland, Virginia, and West Virginia.	Other parts, United States.	Ireland.	England, Scotland, and Wales.	Germany.	All other foreign countries.
Percentage of natives of each locality to total mortality from phthisis . . . . .	34.91	3.08	10.90	23.18	6.42	10.06	2.51	5.03	3.91
Percentage to total mortality . . . . .	54.78	2.09	7.19	16.30	3.96	7.47	1.87	4.55	1.64

Condensing we have:

NATIVITIES.

	District of Columbia.	Other parts United States.	Foreign.
Percentage to mortality from phthisis.....	34.91	43.58	21.51
Percentage to total mortality.....	54.78	29.54	15.53

This shows a difference of 19.87 per cent. less to the total number of deaths from consumption than that to the total mortality in favor of natives of this District, and that the percentage to mortality from consumption exceeds the percentage to total mortality among the natives of all other sections in this country and from foreign countries. The greatest difference exists between the percentages of Virginia and Maryland, the least between those of New England. Among the foreign born the greatest difference is shown among the Irish, the least among the Germans. Condensing all those born in the United States and outside the District of Columbia and all the foreigners, the total difference of percentage among the former is 14.04; among the latter, 5.98.

This subject may be further illustrated by giving the percentage of deaths from consumption to the total number of deaths among the natives of these several sections of our own country and of foreign countries, these are as follows: District of Columbia, 10.39; New England, 23.91; Middle States, 24.69; Virginia and Maryland, 23.19; other parts United States, 26.44; Ireland, 21.95; England, Scotland, and Wales, 21.95; Germany, 18.00, and all other foreign countries, 38.89.

For every section of the United States and foreign country, save that of Germany, the percentage of consumption to total deaths of its natives is more than double that among the natives of this District. Among all the natives of other sections of the United States the percentage of deaths from consumption to total deaths is 24.04, and of natives of foreign countries, 22.55. A statement of these facts may be made a little clearer, perhaps, as follows: In 1,000 deaths in this District, of natives of the District, 104 occur from consumption; of natives of New England in the same number of deaths there are 239 from consumption; of the Middle States, 247; of Virginia, West Virginia, and Maryland, 232; of other parts of the United States, 264; of Ireland, 220; of England, Scotland, and Wales, 220; of Germany, 180; and of all other foreign countries, 390. Of those of United States outside the District of Columbia there are 240, and of all foreign countries combined there are 226.

If we had the exact number who are natives of other sections and countries that make up our population, these figures could be made still more interesting.



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In comparing the ages of these decedents with their nativity, we get the following:

Ages.	Natives District of Columbia.			Natives other parts United States.			Natives foreign countries.			Total deaths.	Percentage to total deaths from consumption.
	Number deaths from consumption.	Percentage to total deaths from consumption of this age.	Percentage to total deaths from consumption of this nativity.	Number deaths from consumption.	Percentage to total deaths from consumption of this age.	Percentage to total deaths from consumption of this nativity.	Number of deaths from consumption.	Percentage to total deaths from consumption of this age.	Percentage to total deaths from consumption of this nativity.		
Under 20 years of age.....	39	79.59	31.2	9	18.37	5.77	1	2.04	1.30	49	13.69
Between 20 and 30 years.....	49	50.52	39.2	36	37.11	23.07	12	12.37	15.58	97	27.10
Between 30 and 40 years.....	14	16.47	11.2	47	55.30	30.13	24	28.23	31.17	85	23.74
Over 40 years.....	23	18.11	18.4	64	50.40	41.03	40	31.49	51.95	127	35.47

By this it is shown that the natives of this District furnish nearly 80 per cent. of the total mortality from this disease under 20 years of age, and 31.2 per cent. of all those who are natives of the District are of the same age; and of the decedents between 20 and 30 years of age, this District furnishes 50.52 per cent., the rest of the United States furnishes 37.11 per cent., and foreign countries 15.58 per cent.; between the ages of 30 and 40 the District falls far below, furnishing but 16.47 per cent. of the decedents, the rest of the United States 55.30 per cent., and foreign countries 28.23 per cent. At 40 years and above, the District is still below, furnishing but 18.11 per cent., the rest of the United States 50.40 per cent., and the foreign countries 31.49 per cent. It will also be seen that although the native-born population furnish less deaths from consumption in proportion to whole number of deaths among them than the natives of either of the other localities, still the ages of the native-born do not average as high as the others; for instance, 70.4 per cent. of the deaths among natives were persons under 30 years of age; among those born in the United States, outside of the District, the per cent. is but 28.84, and of foreign-born 16.88.

If the theory of heredity be true of a large portion of the cases of consumption, undoubtedly this locality has a very beneficial effect in staying the approaches of the disease, and checking its progress after the attack; for in scanning the table it will be seen that a very large percentage of the decedents whose nativity was outside the District of Columbia have been residents 10 years or more. Of this portion of the decedents that are tabulated, but 16, or 11.04 per cent., were residents under 1 year, and of these 2 only were under 20 years of age; 6 between 20 and 30; 4 between 30 and 40, and 4 over 40 years of age; 17, or 11.72 per cent., were residents between 1 and 5 years; 25, or 17.24 per cent., were residents between 5 and 10 years; and 87, or 60 per cent., were residents 10 years and over. Of the foreign-born, 11, or 15.07 per cent., were residents under 1 year, none of whom were under 20 years of age; 9, or 12.33 per cent., were residents between 1 and 5 years; 6, or 8.22 per cent., were residents between 5 and 10 years; and 47, or 64.38 per cent., were residents for 10 years or more.

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Statement showing the percentages of deaths from consumption to total deaths, arranged by different ages and nativities.

[The 67 cases mentioned in note to Table III being excluded for want of sufficient data.]

Ages.	Nativities.										Number of deaths from consumption.	Total mortality.	Percentage of deaths from consumption to total mortality.
	District of Columbia.			Other parts of the United States.			Foreign countries.						
	Number of deaths from consumption.	Total number of deaths.	Percentage of deaths from consumption to total mortality.	Number of deaths from consumption.	Total number of deaths.	Percentage of deaths from consumption to total mortality.	Number of deaths from consumption.	Total number of deaths.	Percentage of deaths from consumption to total mortality.				
Under 20 years of age . . . . .	39	986	3.96	9	100	9.00	1	6	16.66	49	1,092	4.49	
Between 20 and 30 years . . . . .	49	83	59.16	29	55	52.73	12	22	54.55	90	160	56.25	
Between 30 and 40 years . . . . .	14	42	33.33	46	102	45.10	24	54	44.44	84	198	42.42	
40 years and over . . . . .	23	92	24.53	61	355	17.18	36	232	15.52	120	679	17.67	
Total . . . . .	125	1,203	10.39	145	612	23.69	73	314	23.25	343	2,129	16.11	

It will be seen by this statement that but a small per cent. (4.49) of the decedents under 20 years of age die of consumption, and that more than one-half (56.25 per cent.) of those between 20 and 30 years, 42.42 per cent. of those between 30 and 40 years, and but 17.67 per cent. of those 40 years of age and over.

The following shows the number of deaths from consumption in each 1,000 deaths of the three different nativities and the four specified ages:

Ages.	District of Columbia.	Other parts United States.	Foreign countries.	Total.
Under 20 years of age.....	40.	90.	167.	50.
Between 20 and 30 years .....	592.	527.	546.	563.
Between 30 and 40 years .....	333.	451.	444.	424.
40 years and over .....	245.	172.	155.	177.

The division of the table treating of pneumonia is not so full of interest as the preceding. It shows, however, that there is but little of this disease between the ages of 5 and 40 years, whereas in consumption this is the period of life when it is the most destructive.

But few cases of death occur from cancer prior to the 40th year.

TABLE III.—DEATHS.—Showing nativity, duration of residence in the District of Columbia, and age of white decedents dying of the three diseases specified, and from all other causes, for the year ending June 30, 1879.

Diseases.	Age of decedent.	District of Columbia.										New England States.			Middle States.			Maryland, West Virginia, and Virginia.			United States, not specified.			Ireland.			England, Scotland, and Wales.			Germany.			All other foreign countries.			
		Duration of residence.			Duration of residence.			Duration of residence.			Duration of residence.			Duration of residence.			Duration of residence.			Duration of residence.			Duration of residence.			Duration of residence.			Duration of residence.			Duration of residence.				
		Under 1 year.	1 to 5 years.	5 to 10 years.	10 years and over.	Under 1 year.	1 to 5 years.	5 to 10 years.	10 years and over.	Under 1 year.	1 to 5 years.	5 to 10 years.	10 years and over.	Under 1 year.	1 to 5 years.	5 to 10 years.	10 years and over.	Under 1 year.	1 to 5 years.	5 to 10 years.	10 years and over.	Under 1 year.	1 to 5 years.	5 to 10 years.	10 years and over.	Under 1 year.	1 to 5 years.	5 to 10 years.	10 years and over.	Under 1 year.	1 to 5 years.	5 to 10 years.	10 years and over.			
Phthisis pulmonalis, or consumption.	Under 5 years	13																																		
	5 to 10 years	3	1																																	
	10 to 20 years	23																																		
	20 to 30 years	49		2																																
	30 to 40 years	14		1	1	3	1	3	18	1	2	2	3																							
Pneumonia	40 and over	23		1	3		2	5	10	4	3	2	27																							
	Under 5 years	65				2				2	1																									
	5 to 10 years	2																																		
	10 to 20 years	3								1																										
	20 to 30 years	1																																		
Cancers	30 to 40 years	3	1																																	
	40 and over	5				1	1	2	4	2	1	3	13																							
	Under 5 years																																			
	5 to 10 years																																			
	10 to 20 years																																			
All other diseases.	20 to 30 years																																			
	30 to 40 years	22																																		
	40 and over	56	2	4	3	10	7	8	3	46	15	11	96	8	3	5	9	2	9	9	58	3	3	1	10	1	1	13	3	3	4	42	2	4	3	6

NOTE.—Four cases are included with the above cases of phthisis, the immediate cause of death being hæmoptysis. All cases are excluded from the above table where any one of the above facts were omitted or stated as unknown by the certifying physician or coroner. There are 67 of these cases, of which 15 died of phthisis pulmonalis; 1 of pneumonia, and 6 of hæmoptysis. 1 (between 19 and 29) from the New England States; 1 (between 29 and 40) from the Middle States; 1 (between 40 and 50) from the South Carolina; 2 (both over 40) from Ireland; and 2 (both over 40) from other foreign countries. Of the nativity of these 67 they were as follows: 7 of the Middle States; 17 of Virginia and Maryland; 2 of other parts of the United States; 10 of Ireland; 4 of England; 5 of all other foreign countries, and 3 nativity not given.

Table IV, showing the nativity, &c., of the colored decedents, reveals the fact that they are not so much of a migrating class as the whites. There were 42 cases among these colored decedents that could not be tabulated on account of the certificates failing to give some one or more of the required facts. Owing to so many defects in the certificates of the colored decedents, the same degree of accuracy cannot be made in estimating the different percentages for them as for the whites. Wherever information contained in the note accompanying the table can be used it will be without specifying it.

Of the 2,073 deaths tabulated 1,358, or 65.51 per cent., of the decedents were natives of the District, and 715, or 34.49 per cent., were natives of other parts of the United States. Among the white decedents but 1,203, or 56.51 per cent., were natives of the District. Of the colored decedents born outside the District, 48, or 2.32 per cent., had resided here less than 1 year. This, added to the number of whites of the same length of residence, and we have 180, or 4.43 per cent., of the total mortality, and a mortality of 1.024 per 1.000 per annum for the total population.

There were 363 cases of consumption, of which number natives of the District furnished 134, or 36.91 per cent. This percentage is 2.00 above that furnished by the native whites. The colored decedents born outside the District furnish 229, or 63.09 per cent., of the consumption occurring among their race. It will thus be seen that the percentage of the consumption in this District for the past year furnished by those born beyond its limits was 64.08.

The percentage of the number dying of consumption to the total mortality among the natives of the District was 9.86; that of those born beyond the District, 30.78.

In other words, in 1,000 deaths of native colored persons in this District, but 99 would be of consumption; among the same number of decedents born outside the District, there would be 309.

In comparing the ages and nativities of these decedents we get the following:

Ages.	Nativities.												Total deaths from consumption.	Total deaths.	Percentage of deaths from consumption to total deaths.
	District of Columbia.					Other parts United States.									
	Number deaths from consumption.	Percentage to total deaths from consumption of this age.	Percentage to total deaths from consumption of this nativity.	Total deaths for each age specified.	Percentage of deaths from consumption to total deaths.	Number deaths from consumption.	Percentage to total deaths from consumption of this age.	Percentage to total deaths from consumption of this nativity.	Total deaths for each age specified.	Percentage of deaths from consumption to total deaths.	Total deaths from consumption.				
Under 20 years...	92	79.31	68.66	1,259	7.30	24	20.69	10.96	81	29.63	116	32.86	1,340	8.66	
Between 20 and 30 years.....	27	26.73	20.15	37	72.97	74	73.27	33.79	141	52.48	101	28.61	178	56.74	
Between 30 and 40 years.....	8	14.54	5.97	23	34.78	47	85.46	21.46	113	41.60	55	15.58	136	40.44	
Over 40 years ....	7	8.64	5.22	39	17.95	74	91.36	33.79	380	19.47	81	22.95	419	19.33	
[Total.....	134	.....	.....	1,358	9.87	219	.....	.....	715	30.21	353	.....	2,073	17.03	

From these statements we get the following summaries, in round numbers:

In 1,000 deaths from consumption among the native colored persons in the District, 687 will be under 20 years of age; 201 between 20 and 30; 60 between 30 and 40, and but 52 will be 40 and over.

Of the same number of deaths from consumption among those born outside the District, there would be 110 under 20 years of age; 338 between 20 and 30; 214 between 30 and 40, and 338 would be 40 and over.

In 1,000 deaths from consumption of all nativities and under 20 years of age, the natives of the District will furnish 793, and those born outside, 207; of the same number of deaths between 20 and 30, the District will furnish 267, while 733 came from beyond its limits; between 30 and 40, the District will furnish 145; outside, 855; of 40 and over, the District will furnish 86; outside, 914.

In 1,000 deaths from *all causes*, consumption furnishes the following proportions for each of the two different nativities, and for each of the specified ages, and also for total of nativities:

Nativities.	District of Columbia.	Other parts of the United States.	Total.
Under 20 years of age .....	73	296	87
Between 20 and 30 years .....	730	525	567
Between 30 and 40 years .....	348	416	404
40 years and over .....	180	195	193

Many of the remarks made in regard to the white decedents are also applicable to the colored. There are several points of difference that may be detected by inspection of the tables and statements.

TABLE IV.—DEATHS.—*Showing nativity, duration of residence in the District of Columbia, and age of colored decedents dying of the three diseases specified and from all other causes, during the year ending June 30, 1879.*

Diseases.	Age of decedents.	District of Columbia.	Maryland and Virginia.				All other States and foreign countries.			
			Duration of residence.				Duration of residence.			
			Under 1 year.	1 to 5 years.	5 to 10 years.	10 years and over.	Under 1 year.	1 to 5 years.	5 to 10 years.	10 years and over.
Phthisis pulmonalis or consumption.	Under 5 years	64	1	1	—	—	1	—	—	—
	5 to 10 years	9	—	—	—	—	—	—	—	—
	10 to 20 years	19	—	1	9	10	—	1	—	—
	20 to 30 years	27	5	1	13	45	—	3	1	—
	30 to 40 years	8	1	3	7	33	1	—	1	1
Pneumonia	40 and over	7	—	2	7	63	—	1	—	1
	Under 5 years	169	3	1	—	—	1	—	—	—
	5 to 10 years	17	1	—	—	—	—	—	1	—
	10 to 20 years	1	—	—	1	—	—	—	—	—
	20 to 30 years	1	1	2	1	9	—	—	—	—
Cancers	30 to 40 years	3	—	—	2	10	—	—	1	2
	40 and over	2	—	1	4	18	—	1	1	1
	Under 5 years	—	—	—	—	—	—	—	—	—
	5 to 10 years	—	—	—	—	—	—	—	—	—
	10 to 20 years	—	—	—	—	—	—	—	—	—
All other diseases	20 to 30 years	—	—	—	—	3	—	—	—	—
	30 to 40 years	2	—	—	1	1	—	—	—	—
	40 and over	4	—	—	1	15	—	—	—	—
	Under 5 years	895	8	6	—	—	4	1	—	—
	5 to 10 years	66	3	6	2	—	—	—	—	—
	10 to 20 years	19	2	2	5	8	—	—	1	—
	20 to 30 years	9	5	7	15	21	2	—	—	1
	30 to 40 years	10	2	—	10	35	—	—	—	2
	40 and over	26	5	12	26	204	2	3	—	12

NOTE.—One included among the above cases of phthisis, the immediate cause of whose death was hæmoptysis. All cases are excluded from the above table where any one of the above facts were omitted or stated as unknown by the certifying physician or coroner. There are 40 of these cases: 10 are cases dying of phthisis, all natives of Maryland and Virginia. The nativity of these 40, except for the 10 dying of phthisis, given above, were as follows: 19 of Virginia and Maryland, and 11 not given. The duration of residence in the District is given in 4 cases: 3 under one year and 1 eighteen years.

Tables V and VI were compiled for the purpose of illustrating certain phases of consumption. They show the number of the two races, sex, and different ages, that fall victims to this scourge of humanity. Of the 716 deaths during the year resulting from this disease, 354 were white and 362 colored; of the whites, 171 were males and 183 females; of the colored, 157 were males, and 205 females; the females of both races, it will be seen, furnishing the greater number of victims. Of the total mortality for the year, this cause alone furnishes 16.62 per cent., or nearly  $\frac{1}{6}$  of all the deaths; 15.13 per cent. of the deaths of white males result from this disease; 17.17 per cent. of the white females; 14.94 per cent. of the colored males, and 19.30 per cent., nearly  $\frac{1}{5}$ , of the colored females.

The annual death-rate per 1,000 of the population was 4.212, divided among the two races and sexes as follows: For the white males, 2.959; white females, 3.256; colored males, 5.717, and colored females, 7.183. The whites, male and female combined, furnish an annual death rate of 3.106; the colored, 6.464, the latter being more than double the former. The average ages of those dying from phthisis as shown here gives the white the longer lease of life by 6.55 years for the males, and 9.42 for the females.

A large proportion of the deaths from phthisis occurs before the fifth year of age is reached, and more especially among the colored population; 18.51 per cent. of their mortality from this disease occurring at this early age, and only 3.95 per cent. of the whites. Over 3 per cent. of the total mortality of the colored population for the year was from this disease among their children under 5 years of age. It furnishes at this early period of their lives an annual death rate of 1.196 per 1,000. Between the ages of 5 and 10 years the decline in the number of deaths is from 81 to 11. During the next 10 years of life the mortality increases rapidly, furnishing 75 deaths, divided as follows: white males, 10; white females, 23; colored males, 14; colored females, 28. Between the ages of 20 and 30 the mortality has more than doubled that of the preceding 10 years, being for this period 197: whites, 94, and 103 colored, 27.51 per cent. of the total deaths from phthisis occurring during these 10 years, and 20.39 per cent. during the next 10, viz, between 30 and 40, and between 40 and 50, 12.71 per cent.; between 50 and 60 there were 57 deaths, or 7.96 per cent.; between 60 and 70, 41 deaths, or 5.72 per cent.; and above 70, 17 deaths, or 2.38 per cent. The following are the percentages to the total mortality of those dying under 30 years of age from phthisis: white males, 37.43; white females, 43.71; colored males, 58.6, and colored females, 62.44, showing a percentage in favor of the white male over the colored of 21.17, and of the white female over the colored of 18.73; of the white male over the white female of 5.28, and of the colored male over the colored female of 3.84; and of the white male and female combined over the colored, 19.09 per cent.



TABLE V.—DEATHS.—Showing deaths from phthisis pulmonalis, arranged according to color, with percentages.

	White.		Colored.		Total white.	Total colored.	Total.
	Male.	Female.	Male.	Female.			
Total deaths.....	171	183	157	205	354	362	716
Percentage to mortality from this disease.....	23.88	25.56	21.93	28.63	49.44	56.56	100
Percentage to total mortality.....	23.88	25.56	21.93	28.63	49.44	56.56	100
Percentage to mortality of each sex and color.....	12.13	17.25	3.64	8.76	18.12	17.13	16.62
Death-rate per 1,000 for each color and sex.....	2.939	3.256	5.717	7.183	3.106	6.404	4.212
Average ages in years.....	33.47	33.42	28.92	26.00	.....	.....	.....



Table VII shows the number, arranged by color and sex, who died under 1 year of age during the year. It shows the number of each dying during each month; the percentage of each during the month to the total.

Of the 1,206 children who died under 1 year of age, 267, or 22.14 per cent., were white males; 236, or 19.57 per cent., white females; 374, or 31.01 per cent., colored males; and 329, or 27.28 per cent., colored females. It will be seen that as many died 1 day old or under as between 1 day and 1 week. The total number under 1 month was 394, or 32.66 per cent of the whole. The greatest number of deaths were among those aged between 1 week and 1 month, being 12.60 per cent. of the total, divided as follows between the races and sexes: White males 30, or 11.24 per cent. of their total; white females 31, or 13.13 per cent.; colored males 49, or 13.10 per cent.; and colored females 42, or 12.77 per cent. The least number of the children 47, or 3.9 per cent. of the total, were between 11 and 12 months. June proved the most fatal month of the year, 210, or 17.41 per cent. of the total dying during this month, divided as follows: White males 52, or 19.48 per cent. of their total; white females 55, or 23.3 per cent.; colored males 55, or 14.71 per cent.; and colored females 48, or 14.59 per cent. The greatest number of deaths among the colored females occurred during the month of July, 1878, being 57, or 17.33 per cent. of their total for the year. The least monthly mortality (67 deaths, or 5.56 per cent.) occurred in May. The death-rate per 1,000 represented by these decedents was 4.41 for the white population and 12.55 for the colored, the latter nearly three times that of the former.

The following shows the population (estimated), number of deaths, and death-rates per 1,000 under 1 year of age for both races during the year: White population, 3,215; deaths, 593; rate, 156.45. Colored population, 1,751; deaths, 703; rate, 401.48. For total population, 4,966; deaths, 1,296; rate, 242.85.

In New York City the annual death-rate per 1,000 for population under 1 year of age is 307.39.

The following are some of the principal diseases of which these infants died: Measles, 3 white, 1 colored; croup, 3 white, 4 colored; diphtheria, 2 white, 4 colored; scarlet fever, 8 white, 1 colored; malarial fever, 6 white, 6 colored; diarrhœa, dysentery, and entero-colitis, 42 white, 57 colored; cholera infantum, 65 white, 76 colored; whooping-cough, 3 white, 12 colored; congenital syphilis, 3 white, 4 colored; inanition, 28 white, 35 colored; tubercular diseases, 51 white, 64 colored; convulsions, 37 white, 113 colored; trismus nascentium, 11 white, 29 colored; other nervous diseases, 34 white, 25 colored; bronchitis and congestion of the lungs, 27 white, 47 colored; pneumonia, 26 white, 77 colored; dentition, 12 white, 15 colored; developmental diseases of children, 99 white, 84 colored; and violence, 8 white, and 26 colored.







Table VIII shows the number of children dying under 5 years of age, together with 19 of the principal causes of death, and several different percentages and death-rates, and is of value not only to the medical practitioner, but also the physiologist, hygienist, and sanitarian. There were a total of 2,020 of these deaths.

The following statement shows the number, according to color of each, of the specified ages and the percentage to the total mortality of each under 5 years of age:

Ages.	White.		Colored.		Total number of deaths under 5 years.	Percentage to total mortality under 5 years.
	Number of deaths.	Percentage to mortality of white under 5 years.	Number of deaths.	Percentage to mortality of colored under 5 years.		
Under 1 year of age .....	503	58.49	703	60.60	1,206	59.70
Between 1 and 2 years .....	161	18.72	261	22.50	422	20.89
Between 2 and 3 years .....	87	10.12	100	8.62	187	9.26
Between 3 and 4 years .....	58	6.74	57	4.92	115	5.69
Between 4 and 5 years .....	51	5.93	39	3.36	90	4.46
Total .....	860	100.	1,160	100.	2,020	100.

It will be seen that the colored exceeded the whites under 1 year of age by 200; between 1 and 2 years by 100; and between 2 and 3 years, 13; the white exceeded the colored between 3 and 4 years by 1, and between 4 and 5 by 12. Considerably more than one-half of the mortality under 5 years of age was of infants under 1 year.

The above table may be made clearer by the following: First, of white children—in a total mortality of 1,000 under 5 years of age 585 would be under 1 year of age, and of this number 311 males and 274 females; 187 (88 males and 99 females) between 1 and 2 years; 101 (49 males and 52 females) between 2 and 3 years; 68 (35 males and 33 females) between 3 and 4 years, and 59 (30 males and 29 females) between 4 and 5 years, making in the 1,000, 513 males and 487 females; males in excess of females 26. Of colored children, in a total mortality of 1,000 under 5 years of age, 606 would be under 1 year of age, of which 322 will be males and 284 females; 225 (126 males and 99 females) between 1 and 2 years; 86 (46 males and 40 females) between 2 and 3 years; 49 (23 males and 26 females) between 3 and 4 years; 34 (17 males and 17 females) between 4 and 5 years, making in the 1,000, 534 males and 466 females; males in excess of females 68.

In 1,000 deaths of children under 5 years of age of both races combined, there would be of whites 426 (males 219, females 207); colored 574 (males 307, and females 267), showing an excess of 148 in the 1,000 of colored over white; of colored males over white males 88, and colored females over white females 60.

The diseases of which these children die next deserve our attention. Pneumonia stands at the head of the list as regards fatality. Of the 244 deaths from this cause, 70, or 28.69 per cent., were white, and 174, or 71.32 per cent., were colored; 8.14 per cent. of all the deaths of white children under 5 years of age were from pneumonia; 15.00 per cent. of the col-

ored—being almost twice as fatal among the latter than among the former. The disease producing the next greatest number of deaths is cholera infantum, 189, or 9.35 per cent. of the total under 5 years; 84, or 9.77 per cent., of the white, and 105, or 9.05 per cent., of the colored resulted from this cause; of diarrheal diseases, aside from cholera infantum, we have a large supply. Proving much more fatal to the colored than to the whites, for while but 45 white children fell victims to it, there were 85 among the colored race. Of the tubercular diseases, aside from phthisis or consumption, which is treated elsewhere, the colored are again in the majority by 35. Of the acute diseases of the brain, including meningitis, congestion of the brain, effusion, &c., the white children number the most by 21; but of convulsions the colored outnumber the whites by 89. Trismus nascentium has, from some cause, greatly fallen off in the last twelve months. For the nine months covered by the last report there were 70 cases, almost 6 per month, while for the last twelve months there have been but 40 reported, being but  $3\frac{1}{3}$  per month. Attention is called to disparity of deaths from measles, croup, diphtheria, and scarlet fever between the two races. From these four diseases there were 140 deaths among the white children and but 32 among the colored; the former being more than four times the latter. From whooping-cough three times as many colored as white children die; bronchitis and congestion of the lungs are fatal to nearly twice as many colored as white children. Of diseases of the digestive organs there were 4 more deaths of the whites than colored. Of accidents and negligence the colored are 15 more than the whites.



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TABLE VIII.—DEATHS.—Showing number of deaths of children under 5 years of age and 19 of the principal causes of death, classified by color and sex, with percentages and death-rate for the year ending June 30, 1879.

Diseases.	White.				Colored.				Total deaths.	Percentage to total mortality under 5 years of age.
	Males.	Females.	Total.	Percentage to total mortality of whites under 5 years of age.	Males.	Females.	Total.	Percentage to total mortality of colored under 5 years of age.		
Measles.....	4	3	7	.81	.....	2	2	.17	9	.44
Croup.....	12	12	24	2.79	9	6	15	1.30	39	1.93
Diphtheria.....	12	17	29	3.37	8	3	11	.95	40	1.98
Scarlet fever.....	38	42	80	9.29	8	1	4	.35	84	4.15
Typhoid and malarial fevers.....	5	12	17	1.98	14	10	24	2.07	41	2.03
Diarrhœal diseases (except cholera infantum).....	23	22	45	5.23	41	44	85	7.33	130	6.44
Cholera infantum.....	40	44	84	9.77	48	57	105	9.05	189	9.36
Whooping-cough.....	1	5	6	.70	12	7	19	1.64	25	1.24
Inanition.....	12	18	30	3.49	21	23	44	3.79	74	3.66
Scrofula, tuberculosis, marasmus, and tabes mesenterica.....	12	23	35	4.07	30	34	64	5.52	100	4.95
Hydrocephalus and tubercular meningitis.....	13	13	26	3.02	18	14	32	2.75	58	2.87
Acute diseases of the brain.....	39	35	74	8.60	35	18	53	4.57	127	6.28
Convulsions.....	24	16	40	4.64	75	54	129	11.12	169	8.36
Trismus nascentium.....	6	5	11	1.28	13	16	29	2.50	40	1.98
Bronchitis and congestion of the lungs.....	23	20	43	5.00	45	36	81	6.98	124	6.13
Pneumonia.....	39	31	70	8.14	87	87	174	15.00	244	12.08
Diseases of the digestive organs.....	26	22	48	5.58	26	18	44	3.79	92	4.55
Developmental diseases of children.....	63	39	102	11.89	48	36	84	7.24	186	9.20
Accidents and negligence.....	12	9	21	2.44	18	18	36	3.10	57	2.82
All other causes.....	37	31	68	7.91	70	55	125	10.78	193	9.55
Total.....	441	419	860	100.00	621	539	1,160	100.00	2,020	100.00
Percentage to total mortality under 5 years, by sex and color.....	21.831	20.743	42.574	.....	30.743	26.683	57.426	.....	100.00	.....
Death-rate per 1,000 under 5 years, by sex and color.....	54.29	53.06	53.68	.....	136.42	119.00	127.72	.....	80.47	.....
Death-rate per 1,000, total population, by sex and color.....	7.63	7.46	7.54	.....	22.61	18.89	20.35	.....	11.88	.....
Percentage to total mortality, by sex and color.....	39.03	39.31	39.16	.....	59.09	50.75	54.89	.....	46.88	.....

Table IX shows the location, within certain prescribed limits, as denoted by the accompanying map, of phthisis pulmonalis or consumption, pneumonia, cholera infantum, scarlet fever, diphtheria, typhoid fever, malarial fevers, diarrhœal diseases, and all others not specified above.

These divisions of the District were made arbitrarily and for convenience, and not specially, because some were believed to be more or less sanitary and healthful than others. Whether the facts to be obtained may militate against any locality cannot always be told before this

method of investigation is attempted, but that very important objects may be gained thereby no one can doubt. The general healthfulness of any locality is a great stimulus for attracting wealth and population, and the owners of real estate in a locality noted for its unhealthfulness are ultimately compelled to remove the causes therefor or suffer financially. Had we but the population of these different divisions the table would be almost complete, but as this has not been obtained, the best use that can be made of it is to compare the different percentages of these several diseases with the percentage of the total number of deaths in the same. Thus in the first division, Georgetown, the total number of deaths was 120, or 3.13 per cent., of the total number of deaths located by this table. In looking over the several deaths from the diseases located here, but two of them are above this percentage; one is diphtheria with a percentage of 3.84, and diarrhœal diseases with a percentage of 5.15 of the total deaths from each of these diseases. In this same division we find that the percentage of births reported is 1.04 less than the deaths, showing a decrease of population in this division of 45 by excess of deaths over births reported. In the second division of Georgetown the percentage of the deaths to the total deaths is 4.62; the deaths from the several diseases specified are nearly all under this general percentage, except scarlet and typhoid fevers and diarrhœal diseases; the latter is but little above, but typhoid fever is in excess by over 4 per cent.

In closely examining the deaths in the several divisions of Washington, great uniformity of the percentages to number of deaths from the different diseases and from the total causes will be perceived running through any one of the divisions; where there may be any great variation from this, some cause probably exists. The deaths from phthisis pulmonalis will be found in excess of the general average in the following divisions: Second, third, fifth, sixth, and seventh, of Washington; pneumonia in the first, second, and fifth, of Washington and east of the Eastern Branch; cholera infantum in first, third, sixth, seventh, and eighth, of Washington and west of Eastern Branch; scarlet fever in second, Georgetown; fifth, sixth, seventh, and eighth, of Washington and east of Eastern Branch; diphtheria in first division, Georgetown; first, third, fourth, sixth, and eighth, of Washington; typhoid fever in second division, Georgetown; first, fifth, seventh, and a very large increase in eighth, of Washington; malarial fevers in first, fifth, and seventh, of Washington and east of Eastern Branch; diarrhœal diseases are above the general average in nearly all the divisions. The total number of deaths within the limits of Washington and outside its hospitals was 3,223; the total number of births reported from same was 3,213, being but 10 less than the deaths. Within the limits of Georgetown the number of deaths was 297; births reported 192; being 105 less than the deaths. In the county the number of deaths was 309; births reported 276; being 33 less than the deaths. In the hospitals the number of deaths was 480; births reported 135; being 345 less than the deaths.

In comparing the two diseases, pneumonia and consumption, it will be seen that their percentages vary but little throughout the 16 divisions; in but three do they vary to the extent of 2 per cent., viz, first of Georgetown, second and seventh of Washington. The same relation between these two diseases is exhibited by a similar table published in last annual report.

Between scarlet fever and diphtheria there seems to be no marked relevancy; the same fact was also illustrated by the table just referred to.

TABLE IX.—DEATHS.—Showing location in certain sections as designated by the accompanying maps, of deaths and births not occurring in hospitals or similar institutions, with percentages, for the year ending June 30, 1879.

Diseases.	Georgetown.			Washington.										County.												
	First di- vision.		Second division.	First di- vision.		Second division.	Third di- vision.		Fourth division.	Fifth di- vision.		Sixth di- vision.	Seventh division.	Eighth division.		West of Eastern Branch.		East of Eastern Branch.		Total deaths.	Percentages.					
	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.								
Pneumonia	16	2.59	22	3.55	31	5.03	89	14.43	102	16.53	68	11.02	103	16.69	47	7.62	59	9.56	35	5.68	35	5.68	10	1.62	617	16.11
Cholera infantum	4	1.35	11	2.85	23	5.97	65	16.84	40	10.37	70	18.14	27	7.00	29	7.31	27	7.31	16	4.12	11	2.85	11	2.85	386	10.08
Scarlet fever	3	2.15	7	1.75	10	5.38	18	9.68	39	20.97	10	5.38	25	13.44	16	8.60	19	10.21	25	13.44	15	8.06	4	3.17	186	4.86
Diphtheria	3	3.52	7	5.52	2	1.39	12	9.52	13	10.32	13	10.32	22	17.40	19	15.69	13	10.32	14	11.11	14	11.11	4	3.17	78	2.04
Typhoid fever	2	3.84	1	1.27	5	6.41	10	12.82	19	24.36	14	17.98	2	2.56	12	15.39	10	11.53	3	3.84	3	3.84	3	3.84	78	2.04
Malarial fevers	2	2.94	6	8.82	5	7.35	3	4.41	7	10.30	11	16.18	3	4.41	8	11.76	14	20.60	3	4.41	1	1.47	1	1.47	68	1.77
Diarrhoeal diseases	10	5.15	9	3.84	11	14.10	10	12.82	26	13.40	19	9.79	27	13.40	15	7.73	17	8.26	15	7.73	12	6.19	4	2.07	194	5.07
All other diseases.	76	3.62	114	5.44	106	5.05	274	13.07	311	16.57	259	12.35	294	14.02	136	6.49	169	8.06	145	6.92	138	6.58	44	2.14	2,096	54.74
Total	120	3.13	177	4.62	204	5.33	513	13.40	610	15.93	438	11.44	570	14.89	279	7.29	322	8.41	287	7.49	229	5.98	80	2.09	3,829	100.
Births	77	2.09	115	3.12	191	5.19	443	12.03	683	18.56	382	10.38	579	15.73	270	7.33	333	9.05	332	9.02	185	5.01	91	2.48	3,681	.....

NOTE.—"Malarial fevers" include remittent, intermittent, typho-malarial, malarial, and congestive. "Diarrhoeal diseases" include cholera morbus, diarrhoea, dysentery, and enterocolitis.

Table X gives the duration of scarlet fever, diphtheria, pneumonia, typhoid fever, and phthisis before terminating fatally, according to certificate of attending physician.

The comparatively few fatal cases of scarlet fever and diphtheria among the colored as compared with the number among the white children is noteworthy. It will also be seen that the large per cent. of the deaths of the two races do not occur within the same limits of time. While among the whites 29.82 per cent. of all the deaths from scarlet fever took place on or before the third day, the percentage of the colored was but 16.67, and the total percentage of the white children on or before the fourth day was 46.49, nearly one-half, but 25 per cent. or one-fourth, of the colored succumb so soon, but on the fifth alone 25 per cent. of all the deaths of the colored occur. Over 33 per cent. of the colored and but 14.82 per cent. of the white children live beyond the tenth day. Diphtheria gives some different figures, the third day being more fatal for the colored than for the whites; the percentage of the whites living beyond the tenth day being 24.57, of the colored 37.50. In scarlet fever 59.65 per cent. of the deaths among the white children occur on or before the fifth day, in diphtheria 45.62; among the colored children 49 per cent. die on or before the fifth day in scarlet fever, and 37.59 in diphtheria; showing that scarlet fever is more fatal in its early stages for both races than diphtheria, scarlet fever being 10.65 per cent. more fatal to the white than the colored children in this early stage (5 days and under), and diphtheria 8.12 per cent. Pneumonia also proves fatal in its early stages to a larger percentage of whites than colored. On or before the fifth day 21.63 per cent. of the whites and 15.58 per cent. of the colored die of this disease; 43.23 per cent. of the whites and 48.58 per cent. of the colored live beyond the tenth day.

In typhoid fever the colored yield to the disease before the whites; 18.19 per cent. of the whites and 25.92 per cent. of the colored die on or before the tenth day. The tenth, fourteenth, and twenty-first days of the disease seem to be the most fatal during its course, and more especially the fourteenth, 20.43 per cent. of the whites and 22.24 of the colored dying on this day. The table in the report of last year shows the same tendency to fatality on these days.

In phthisis we again find the colored yielding to the disease before the whites: 47.21 per cent. of the whites and 59.83 per cent. of the colored die within six months after the disease has been recognized; 23.46 per cent. of the whites and 14.74 per cent. of the colored living beyond one year.

map pulled, 1/1997

TABLE X.—DEATHS.—Showing duration of certain diseases terminating fatally and number dying at or during certain periods, together with the percentages of the number dying of the particular disease at such specified periods to the total number where duration of the disease is given; also total deaths from each disease, and number where duration of disease is given by certifying physician, arranged according to color, for the year ending June 30, 1879.

	Scarlet fever.				Diphtheria.				Pneumonia.				Typhoid fever.				Plithisis pulmonalis.			
	White.		Colored.		White.		Colored.		Duration of disease.		White.		Colored.		Duration of disease.		White.		Colored.	
	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.
Total number of deaths.....	117		12		60		19										354		362	
Number duration of disease is given.....	114		12		57		16										341		346	
Number dying on or before 3d day.....	34		2		9		3		On or before 4th day.....		25		29		On or before 10th day.....		8		75	
Percentage.....	29.82		16.67		15.8		15.75				16.9		11.74		18.19		25.92		21.99	
Number dying on the 4th day.....	19		1		7		2		5th day.....		7		7		11 to 15 days.....		13		86	
Percentage.....	16.67		8.33		12.28		12.50				4.73		2.84		16 to 21 days.....		29.54		25.22	
Number dying on the 5th day.....	15		3		10		1		6th day.....		5		10		6 to 9 months.....		8		34	
Percentage.....	13.16		25.00		17.54		6.25				3.38		4.05		9 to 12 months.....		18.19		9.98	
Number dying on the 6th day.....	11				5				7th day.....		14		48				3		66	
Percentage.....	9.65				8.77						9.46		19.43		22 to 28 days.....		6.81		19.35	
Number dying on the 7th day.....	6		1		5		2		8th day.....		8		10		After 28th day.....		12		18	
Percentage.....	5.26		8.33		8.77		12.50				5.4		4.05				27.27		5.27	
Number dying on the 8th and 9th days.....	6				5		2		9th and 10th days.....		25		23		10th day.....		4		28	
Percentage.....	5.26				8.77		12.50				16.9		9.31				9.1		8.21	
Number dying on the 10th day.....	6		1		2				11 to 14 days.....		21		46		14th day.....		9		34	
Percentage.....	5.26		8.33		3.5						14.19		18.62				20.43		9.98	
Number dying from 11 to 14 days.....	10		2		9		4		15 to 21 days.....		17		29		21st day.....		7		4.63	
Percentage.....	8.77		16.67		15.80		25.00				11.48		11.74				15.91			
Number dying after 14th day.....	7		2		5		2		After 21st day.....		26		45							
Percentage.....	6.15		16.67		8.77		12.50				17.56		18.22							

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Table XI shows the ten diseases from which the greatest number of deaths resulted during the years ending the 30th of September, 1875, '76, '77; for the nine months ending June 30, 1878; and for the year ending June 30, 1879; the total deaths for this time, and the ten diseases producing the greatest number of deaths for the whole time; arranged according to the total number of deaths from each, and by color, with percentages. Phthisis pulmonalis and pneumonia are the two diseases which remain constant in their positions throughout the six divisions of the table, being first and second in each. In the three first divisions the proportion of deaths from phthisis to total mortality among the colored is less than among the whites, but after this it is greater, and in the aggregate it is .16 above. The annual death-rate per 1,000 from this disease among the colored is between 2 and 3 times that among the whites.

The percentage of deaths from pneumonia to total mortality among the colored is from 2.78 in the first division of this table to 7.14 in the fourth, the average difference for whole time being 4.56. In but four of these diseases their percentages to total mortality average less than among the whites, viz, cholera infantum, scarlet and typhoid fevers, and bronchitis; and their percentages are more than double that of the whites in convulsions, tabes, and marasmus. In comparing their average annual death-rates per 1,000 we find the colored to exceed the whites by 3.818 in phthisis; 3.767 in pneumonia; 1.066 in cholera infantum; 2.119 in convulsions; 1.528 in diarrheal diseases; 1.042 in senile debility; 1.214 in tabes, &c.; .112 in typhoid fever; and .285 in bronchitis; and it stands less than the whites by .302 in scarlet fever.

TABLE XI.—DEATHS.—Showing the ten principal causes of death occurring in the District of Columbia, arranged in their order, for the years ending September 30, 1875, 1876, and 1877, and for the nine months ending June 30, 1878, and for the year ending June 30, 1879, with recapitulation for the entire period, classified by sex and color, with percentages and death-rates.

## YEAR ENDING SEPTEMBER 30, 1875.

Diseases.	White.		Colored.		Total deaths.	Percentage to total number of deaths.		Number of deaths in 1,000 population.	
	Male.	Female.	Male.	Female.		White.	Colored.	White.	Colored.
From all causes.....	1,162	1,048	1,029	1,113	4,352	50.781	49.219	19.217	47.600
1. Phthisis pulmonalis .....	164	143	124	148	579	13.891	12.698	2.669	6.044
2. Pneumonia .....	100	87	119	124	430	8.462	11.340	1.626	5.400
3. Cholera infantum .....	73	81	56	60	270	6.968	5.410	1.339	2.577
4. Convulsions .....	41	37	57	62	197	3.529	5.556	.678	2.644
5. Tabes mesenterica and marasmus ..	23	33	56	59	171	2.534	5.369	.486	2.555
6. Senile debility .....	39	33	34	51	157	3.258	3.968	.626	1.888
7. Diarrheal diseases, dysentery, enterocolitis .....	22	30	32	46	130	2.353	3.641	.452	1.733
8. Whooping-cough .....	18	27	36	43	124	2.036	3.688	.391	1.755
9. Typhoid fever .....	29	32	15	24	100	2.760	1.820	.530	.868
10. Inanition .....	24	24	17	26	91	2.172	2.007	.417	.955

## YEAR ENDING SEPTEMBER 30, 1876.

From all causes.....	1,137	1,016	1,041	1,052	4,246	50.707	49.293	18.721	46.511
1. Phthisis pulmonalis .....	165	141	120	169	595	14.213	13.808	2.660	6.422
2. Pneumonia .....	100	72	135	115	422	7.989	11.944	1.495	5.555
3. Cholera infantum .....	93	83	69	63	308	8.175	6.307	1.530	2.933
4. Diarrheal diseases, dysentery, enterocolitis .....	45	49	75	68	237	4.366	6.832	.817	3.177
5. Convulsions .....	36	37	71	49	193	3.390	5.733	.634	2.666
6. Senile debility .....	38	40	30	33	141	3.623	3.010	.678	1.466
7. Apoplexy .....	33	34	21	26	114	3.112	2.246	.582	1.044
8. Tabes mesenterica .....	6	8	36	42	92	.065	3.727	.121	1.733
9. Typhoid fever .....	24	32	14	14	84	2.601	1.338	.486	.622
10. Bronchitis .....	21	25	17	19	82	2.137	1.720	.400	.800

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YEAR ENDING SEPTEMBER 30, 1877.

Diseases.	White.		Colored.		Total deaths.	Percentage to total number of deaths.		Number of deaths in 1,000 population.	
	Male.	Female.	Male.	Female.		White.	Colored.	White.	Colored.
From all causes.....	1,087	1,015	961	1,040	4,103	51.231	48.769	18.278	44.466
1. Phthisis pulmonalis.....	166	147	115	181	609	14.890	14.793	2.721	6.577
2. Pneumonia.....	79	54	110	93	336	6.327	10.145	1.156	4.511
3. Convulsions.....	36	34	85	82	237	3.330	8.346	.608	3.711
4. Cholera infantum.....	48	49	41	57	195	4.615	4.898	.843	2.177
5. Diarrheal diseases, dysentery, entero-colitis.....	43	37	62	52	194	3.806	5.697	.695	2.488
6. Tabes mesenterica and marasmus..	24	29	62	69	144	2.521	6.547	.460	2.911
7. Senile debility.....	35	46	39	61	181	3.853	4.967	.704	2.232
8. Scarlet fever.....	64	63	14	12	133	6.042	1.299	1.104	.577
9. Valvular disease of the heart.....	26	32	17	21	96	2.759	1.899	.504	.844
10. Trismus nascentium.....	11	5	43	33	92	.761	3.798	.139	1.688

NINE MONTHS ENDING JUNE 30, 1878.

From all causes.....	832	740	723	728	3,023	52.000	48.000	13.669	32.244
1. Phthisis pulmonalis.....	121	149	127	153	550	17.176	19.297	2.347	6.222
2. Pneumonia.....	63	49	111	96	319	7.125	14.266	.973	4.600
3. Convulsions.....	26	23	55	38	142	3.117	6.409	.426	2.066
4. Diarrheal diseases, dysentery, entero-colitis.....	35	32	36	27	130	4.326	4.342	.582	1.409
5. Diphtheria.....	41	49	12	21	123	5.725	2.274	.782	.733
6. Scarlet fever.....	40	36	15	11	102	4.835	1.792	.660	.577
7. Senile debility.....	19	39	19	26	94	3.117	3.101	.426	1.000
8. Trismus nascentium.....	5	3	24	38	70	.509	4.273	.069	1.377
9. Typhoid fever.....	25	15	12	11	63	2.545	1.585	.347	.511
10. Premature birth.....	18	9	16	13	56	1.718	1.999	.234	.644

YEAR ENDING JUNE 30, 1879.

From all causes.....	1,130	1,066	1,051	1,062	4,309	50.963	49.037	19.259	37.738
1. Phthisis pulmonalis.....	171	183	157	205	716	16.120	17.132	3.105	6.465
2. Pneumonia.....	81	69	127	129	406	6.831	12.115	1.316	4.572
3. Diarrheal diseases, cholera morbus, dysentery, entero-colitis.....	54	48	56	53	211	4.645	5.159	.895	1.947
4. Cholera infantum.....	40	44	48	57	189	3.825	4.969	.737	1.675
5. Convulsions.....	24	18	75	54	171	1.913	6.103	.368	2.304
6. Senile debility.....	17	51	36	49	153	3.097	4.023	.596	1.518
7. Scarlet fever.....	60	57	8	4	129	5.328	.568	1.026	.732
8. Premature birth.....	33	24	19	22	98	2.596	1.940	.500	.732
9. Bronchitis.....	18	18	35	27	98	1.639	2.934	.316	1.107
10. Congestion of the lungs.....	26	16	22	21	85	1.913	2.035	.368	.768

RECAPITULATION FOR THE PERIOD COVERED ABOVE.

From all causes.....	5,348	4,885	4,805	4,995	20,033	51.08	48.92	18.776	43.556
1. Phthisis pulmonalis.....	787	763	643	856	3,049	15.14	15.30	2.844	6.662
2. Pneumonia.....	423	331	602	557	1,913	7.27	11.83	1.384	5.151
3. Cholera infantum.....	254	257	214	237	902	4.09	4.60	.938	2.004
4. Convulsions.....	163	149	343	285	940	3.95	6.41	.572	2.791
5. Diarrhea.....	199	196	261	246	902	3.86	5.17	.725	2.253
6. Senile debility.....	148	200	158	220	726	3.40	3.86	.638	1.680
7. Tabes mesenterica and marasmus..	53	70	154	170	447	1.20	3.31	.226	1.440
8. Scarlet fever.....	164	156	37	27	384	3.13	.65	.587	.255
9. Typhoid fever.....	78	79	41	49	247	1.53	.92	.288	.400
10. Bronchitis.....	39	43	52	46	180	.80	.10	.150	.435

Table XII shows the number of decedents who had reached each of the several ages from 70 to 100 years, inclusive, arranged according to sex and color, there being a total of 339, or 7.87 per cent. of the total

deaths; 77 were white males, or 6.81 per cent. of their total mortality; 103 white females, or 9.66 per cent; 63 colored males, or 5.99 per cent.; and 96 colored females, or 9.04 per cent.

TABLE XII.—DEATHS.—*Showing the number dying, seventy years of age and over, classified according to sex and color, for the year ending June 30, 1879.*

Ages of decedents.	White.		Colored.		Total.
	Male.	Female.	Male.	Female.	
70 years.....	6	6	11	14	37
71 years.....	3	4	2	3	12
72 years.....	7	4	3	1	15
73 years.....	10	10	3	1	23
74 years.....	6	4	2	5	17
75 years.....	6	4	4	12	26
76 years.....	3	11	2	3	19
77 years.....	3	4	2	2	11
78 years.....	5	5	5	3	18
79 years.....	4	5	1	3	13
80 years.....	3	9	10	12	34
81 years.....	4	4	1	2	11
82 years.....	4	5	2	3	14
83 years.....	6	6	2	2	8
84 years.....	2	1	2	4	9
85 years.....	4	6	3	5	18
86 years.....	4	2	3	6	11
87 years.....	1	2	3	2	4
88 years.....	1	1	2	1	3
89 years.....	1	1	1	1	3
90 years.....	1	1	3	2	6
91 years.....	1	1	1	2	3
92 years.....				2	2
93 years.....				2	2
94 years.....		1		1	1
95 years.....		3		1	4
96 years.....				2	2
97 years.....				2	2
98 years.....				1	1
99 years.....				1	1
100 years and over.....			1	5	6
Total.....	77	103	63	96	339

Table XIII gives the nativities of those dying of senile debility during the year, arranged by color.

TABLE XIII.—DEATHS.—*Showing nativity of those dying of senile debility for the year ending June 30, 1879.*

Color.	District of Columbia.	New England.	Middle States.	Maryland and Virginia.	Other parts of the United States.	Ireland.	England, Scotland, and Wales.	Germany.	Other foreign countries.	Total.
White.....	6	3	5	27	2	13	2	8	2	68
Colored.....	4			78	2				1	85
Total.....	10	3	5	105	4	13	2	8	3	153



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Table XIV shows the number of deaths occurring in hospitals and public institutions, arranged according to color and sex.

TABLE XIV.—DEATHS.—*Showing the number of deaths occurring in hospitals and public institutions during the year ending June 30, 1878.*

Hospitals.	White.		Colored.		Total.
	Male.	Female.	Male.	Female.	
Freedmen's Hospital	6	3	74	56	139
Washington Asylum Hospital	16	4	30	19	69
Home for the Aged	8	3			11
Government Hospital for the Insane	47	9	6	2	64
Children's Hospital	2	1	10	4	17
Providence Hospital	40	27	4	8	79
Barnes Hospital (Soldiers' Home)	28				28
Saint Ann's Infant Asylum	18	28	4	9	59
Louise Home		2			2
Saint Vincent Asylum		2			2
Convent Notre Dame		1			1
Columbia Hospital		2			2
Industrial School (Georgetown)		1			1
Church Orphanage					
United States Naval Hospital	1				1
United States Marine Hospital	1				1
United States Arsenal	1				1
Reform School	1				1
Total	171	83	128	98	480

Table XV is interesting on account of its showing of the diversity of employment in this District. Among the decedents, groom's, and fathers of children born, there are 218 occupations represented. The white males represent 203; white females 19; colored males 55, and colored females 8. There are 68 different mechanical trades, and but 28 different employments under the government, including members of Congress. Among the whites we find more clerks than of any other class, and among the colored more laborers, servants, &c.

TABLE XV.—*Showing the occupation of fathers of children born, of groom's, and of decedents, for the year ending June 30, 1879.*

Occupations.	Fathers.		Groom's.		Decedents.			
					White.		Colored.	
	White.	Colored.	White.	Colored.	Male.	Female.	Male.	Female.
Auditor, deputy sixth	1							
Agents	13	1	10		1			
Auctioneers	3							
Architects	4	1	2		1			
Actor	1					1		
Attorneys and claim-agents	31		15	1	11		1	
Astronomer			1					
Bakers	27	1	3		3		2	
Brushmaker	1							
Blacksmiths	26	7	9		5		3	
Bookbinders	3		1		1			
Bookkeepers	1		4					
Bartenders	6		1					
Brickmakers	6	3		1	2			
Booksellers	1							
Barbers	9	23	1	1	1		4	

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TABLE XV.—Showing the occupation of fathers of children born, &c.—Continued.

Occupations.	Fathers.		Grooms.		Decedents.			
	White.	Colored.	White.	Colored.	White.		Colored.	
					Male.	Female.	Male.	Female.
Butchers	39		6	2	5			
Basketmaker	1							
Brewers	2		1					
Bankers	2		1		1			
Billiards	1							
Boatmaker	1							
Butter-dealers	2		1					
Bank-teller	1							
Builders	3				2			
Bottling establishment	1							
Boatmen			3	1	1		4	
Bailiff							1	
Boiler-maker					1			
Bronzer					1			
Brick-burner							1	
Boot-black							1	
Brokers			1		4			
Brakeman			1	1				
Broommakers			2	1				
Bucketmaker			1					
Confectioners	2							1
Clerks	292	5	74		72	9	1	
Carpenters	108	16	12	2	24		4	
Captains of schooner and steamer	1		1		1			
Clothing-manufacturer					1			
Chemist			1					
Clergymen	5	5	2	2	3		3	
Car-drivers	7		1		2		2	
Caterers					4			
Cabinetmakers	7						2	
Coachmen and hackmen	6	2	1				5	
Cane of chairs					1			
Contractors	7		2		3			
Coachsmith	1				1			
Civil engineers	1		3		3			
Coach-painter					1			
Cooper	1				1			
Copper-rollers	2				1			
Collectors					2			
Conductors	7		7		1			
Cigarmakers	5		1					
Cattle-dealer	1							
Chiropodist	1							
Carriage-trimmer	1							
Calker	1							
Coal-dealers	6		1					
Car-builder			1					
Drivers and teamsters	12	21	4	3	2		10	
Dressmakers and seamstresses						7		22
Druggists and apothecaries	4		3		5			
Dyers	2				1			
Hairies	7	1	1		1	1		
Detective					1			
Director United States Mint					1			
Drug-clerk			1					
Draughtsmen	6		1					
Dentists	2		1					
Examiners Patent Office	2		1		1			
Engineer United States Navy	1							
Engineers	9		4		5			
Engravers	3							
Ensign United States Navy	1							
Editors			2					
Expressman					1			
Fishermen	4				2		1	
Farmers	18	14	44	2	13		1	
Fishmonger							1	
Firemen	14	3	1		1		1	
Florists	3		2					
Folder	1							
Feed-dealers	2	1						
Fruit-dealers	6							
Furrier	1							

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TABLE XV.—Showing the occupation of fathers of children born, &amp;c.—Continued.

Occupations.	Fathers.		Grooms.		Decedents.			
	White.	Colored.	White.	Colored.	White.		Colored.	
					Male.	Female.	Male.	Female.
Furniture-dealers.....	2							
Gardeners.....	8	12	4		2	1	1	
Grocers.....	57	3	12		5	3	1	
Gunsmith.....	1				1			
Gunner United States Navy.....	1							
Guide.....					1			
Housekeepers.....						26		26
Hucksters.....	19	6	2	2	1			
Hostlers.....	3	2			1		3	
Harnessmakers.....	1		1		2			
Hotel-keepers.....	1		2		1			
Hair-weaver.....					1			1
Horse-traders.....								
Hotel-clerk.....			1					
Hide-dealer.....								
Hatter.....	1							
Instrument-maker.....	1							
Iron-worker.....			1					
Inventor.....					1			
Journalists.....	1		5		1			
Justices of the peace.....					2			
Junk-dealer.....	1							
Jewelers.....	3							
Joiner.....	1							
Janitor.....							1	
Laborers.....	160	851	30	113	48		205	
Lumber-merchant.....					1			
Locksmiths and bell-hangers.....	1		11		3			
Letter-carriers.....	2				1			
Livery-stable keeper.....	1				1			
Lithographers.....	2							
Librarian.....	1							
Mechanics.....	17	1	6		5		1	
Midwives.....								4
Members of Congress.....					5			
Merchants.....	61	1	24		19	1		
Messengers.....	13	15	1	1	5	1	5	
Molders.....	8				1			
Marines.....	2				1			
Millwright.....					1			
Machinists.....	19		4		1			
Market-master.....					1			
Miller.....	1				1			
Manufacturers.....			3		1			
Masons.....	24	3	7		12		1	
Mechanical engineer.....			1					
Musicians.....	8	1						
Minister, foreign.....	1							
Marble-worker.....	1							
Mail-agents.....	2							
Officers United States Navy.....	6		5		4			
Officers United States Army.....	1		3		3			
Oyster-dealer.....	1							
Optician.....	1							
Officers House of Representatives.....					2			
Oyster-shucker.....							2	
Office-boy.....							1	
Physicians.....	11		7		10			
Porters.....							10	
Professor United States Naval Observatory.....				2	1			
Policemen.....	13				5		1	
Printers.....	65	1	12		12			
Painters.....	45	6	10	2	8		1	
Pilots.....					2			
Publisher.....					1			
Photographers.....	1		2		1			
Plasterers.....	27	4	2	1	3		3	
President insurance company.....					1			
Paper-carriers.....					2			
Pavers.....	2		1		4			
Plumbers and gas-fitters.....	33		2		3			
Pattern-maker.....			1					
Plate-printers.....	10		1					

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TABLE XV.—Showing the occupations of fathers of children born, &c.—Continued.

Occupations.	Fathers.		Grooms.		Decedents.			
					White.		Colored.	
	White.	Colored.	White.	Colored.	Male.	Female.	Male.	Female.
Produce-dealers	5		1					
Paper-hanger	11		1					
Professor of music			1					
Pianomaker	1							
Pumpmaker	1							
Postal clerks	5				1			
Restaurants	17	1	2		6	1		
Reporters	3				1			
Roofers	1							
Servants, waiters, cooks, &c.	5	106	1	17		21	23	154
Sailors	1		6				2	
Ship-carpenters	3		1		1			
Soldiers	1		3		56			
Stone-cutters	9	1	2		7			
Sailmakers	2				1			
Shoemakers	16	14	7		6		5	
Student					1		1	
Sister of charity					1			
Stenographers	1		2		1			
Surgeon-General Marine Hospital Service					1			
Station-keeper					1			
Superintendent of mills					1			
Signal observers and operators			2					
Superintendent, insane asylum			1					
Saddlers	2		1					
Ship-joiner	1		1					
Sexton			1					
Stair-builder	1		1					
Sheriff			1					
Soapmaker				1				
Secretary of legation	1							
Superintendent railroad	1							
Sanitary inspectors	2							
Silver-plater	1							
Ship-rigger	1							
Teachers	3	1	2		3	7	1	2
Tailors	14		2	1	1			
Tobacconists	6		1		1			
Telegraph-operators	8		11		1			
Tinners	11	2	5					
Timekeeper	1							
Turners			2		1			
Tin and sheet-iron worker					1			
United States Revenue Service								
Upholsterers	4		3				1	
Undertakers	1		2					
Veterinary surgeon	1				1			
Whitewasher							2	
Wheelwrights	6		2		2			
Washers and ironers						1		
Watchmen	23	4			6		2	29
Waterman					1			
Wood-sawyer							3	
Wine-house	1				1			
Weaver					1			
Watchmaker	1							

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Table XVI gives a list of the cemeteries, with number of interments in each, and shows further the number of those of the 4,309 decedents and 395 still-births buried beyond the limits of the District.

TABLE XVI.—*Showing list of cemeteries and number of decedents buried in each, classified as to color, for the year ending June 30, 1879.*

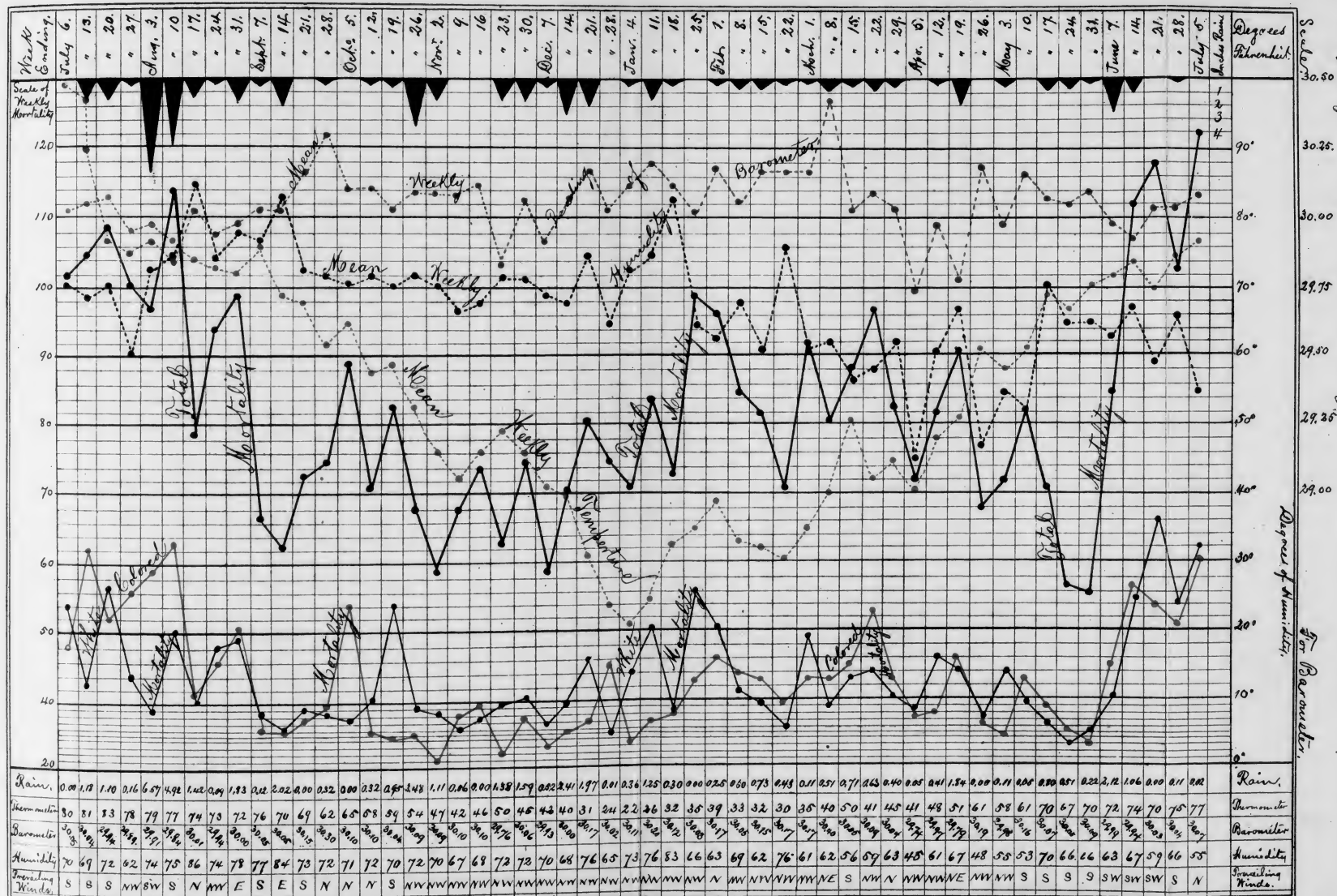
Cemeteries.	White.	Colored.	Total.	Still-births.		
				White.	Colored.	Total.
Oak Hill .....	164	.....	164	7	.....	7
Congressional .....	418	.....	418	16	.....	16
Mount Olivet .....	537	177	714	32	6	38
Glenwood .....	220	.....	220	14	.....	14
Prospect Hill .....	136	.....	136	8	.....	8
Holyrood .....	102	30	132	5	.....	5
Rock Creek .....	65	2	67	1	.....	1
Saint Mary's .....	47	.....	47	6	.....	6
Graceland .....	54	54	108	7	.....	7
Methodist .....	26	.....	26	.....	.....	.....
Presbyterian .....	51	.....	51	1	.....	1
Washington Hebrew .....	19	.....	19	2	.....	2
Adas Israel .....	5	.....	5	.....	.....	.....
Corporation Farm, Georgetown .....	1	.....	1	.....	.....	.....
College .....	1	1	2	.....	.....	.....
Convent Grounds .....	1	.....	1	.....	.....	.....
Carroll Chapel .....	3	.....	3	.....	.....	.....
Howard Cemetery .....	1	.....	1	3	.....	3
Young Men's or Mount Pleasant .....	2	414	416	.....	37	37
Payne's .....	.....	123	123	1	14	15
Beckett's .....	.....	342	342	.....	34	34
Harmony .....	.....	318	318	.....	16	16
Baptist .....	.....	15	15	.....	2	2
Mount Zion .....	1	126	127	.....	10	10
Moore's .....	.....	36	36	.....	10	10
Brightwood .....	.....	10	10	.....	1	1
Hillsdale .....	.....	9	9	.....	.....	.....
Macedonian .....	.....	5	5	.....	1	1
Jones's Chapel .....	.....	8	8	.....	1	1
Ebenezer .....	.....	2	2	.....	.....	.....
Good Hope .....	.....	4	4	.....	.....	.....
Tenallytown .....	10	2	12	.....	.....	.....
Insane Hospital Grounds .....	35	8	43	.....	.....	.....
Soldiers' Home Grounds .....	28	.....	28	.....	.....	.....
Private grounds .....	3	18	21	3	2	5
Potter's Field .....	44	354	398	20	123	148
Outside the District .....	222	55	277	4	3	7
Total .....	2,196	2,113	4,309	130	265	395

Charts 1, 2 and 3 exhibit the course by weeks of the total mortality, by color, from phthisis pulmonalis, pneumonia, scarlet fever, cholera infantum, diseases of the nervous system, and diphtheria, together with deaths under 5, and 60 years of age and over, with meteorological observations, for the year ending June 30, 1879.



CHART I.

Exhibiting the course of the total mortality (with white excluded) by color, in the District of Columbia, for the year ending June 30<sup>th</sup> 1879, with meteorological observations for same period taken at the office of the Chief Signal Officer at Washington D.C.



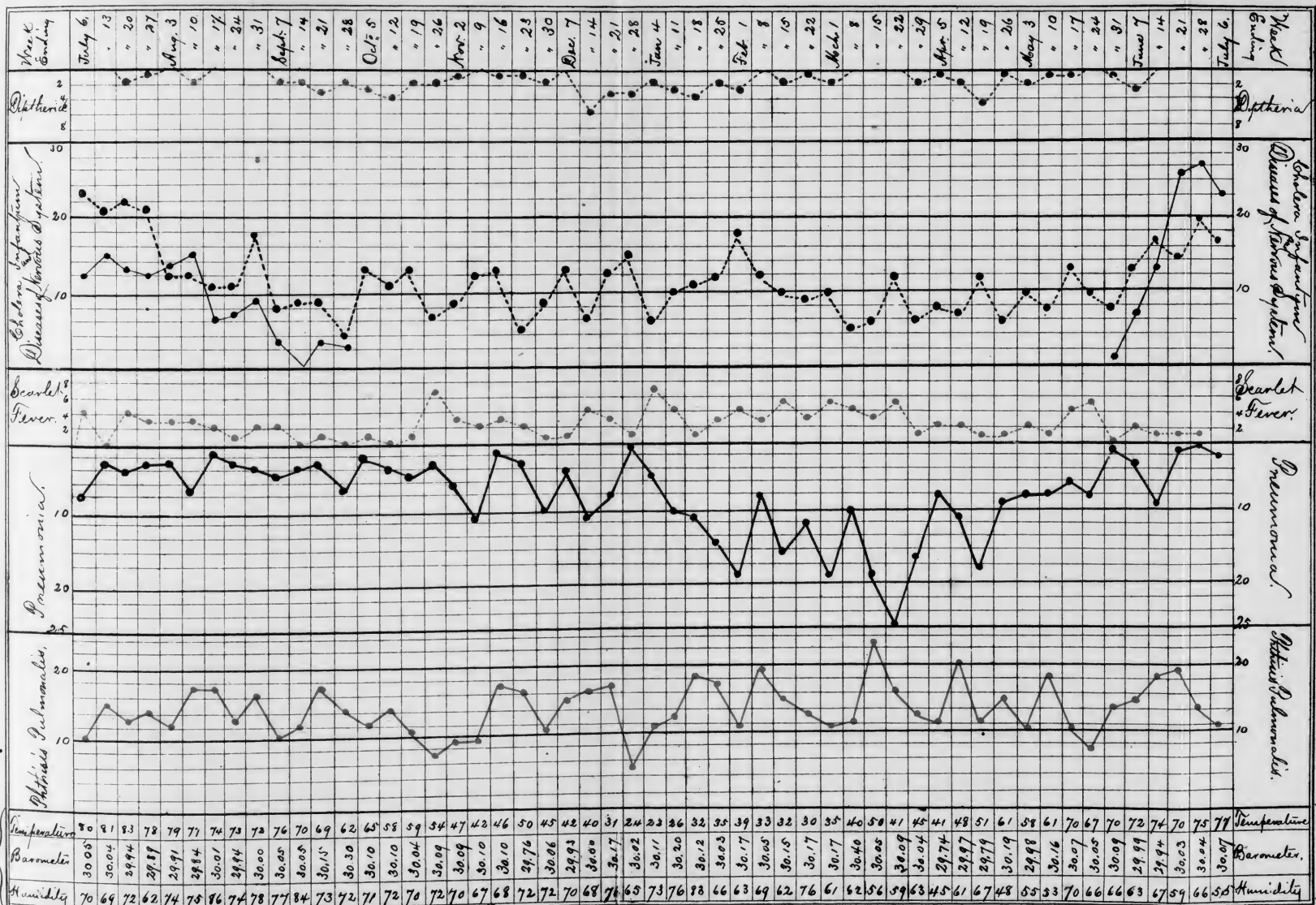
Total Mortality  
" " White  
" " Colored.

Mean Weekly Humidity.  
" " Temperature.  
" " Reading of Barometer.



CHART 2.

Depicting the course of the mortality of *Phthisis Pulmonalis*, *Pneumonia*, *Scarlet Fever*, *Diseases of the Nervous System* and *Diphtheria* in the District of Columbia during the year ending June 30<sup>th</sup> 1879.



Notes:

*Phthisis Pulmonalis*,  
*Pneumonia*,  
*Scarlet Fever*,  
*Diseases of the Nervous System*,  
*Diphtheria*.

*Cholera Infantum*.



### ЧАРТ 3.

Estimating the mortality of children under five years of age and of adults both by means of age and over in the District of Columbia during the year ending June 30, 1879, with meteorological observations for same period.

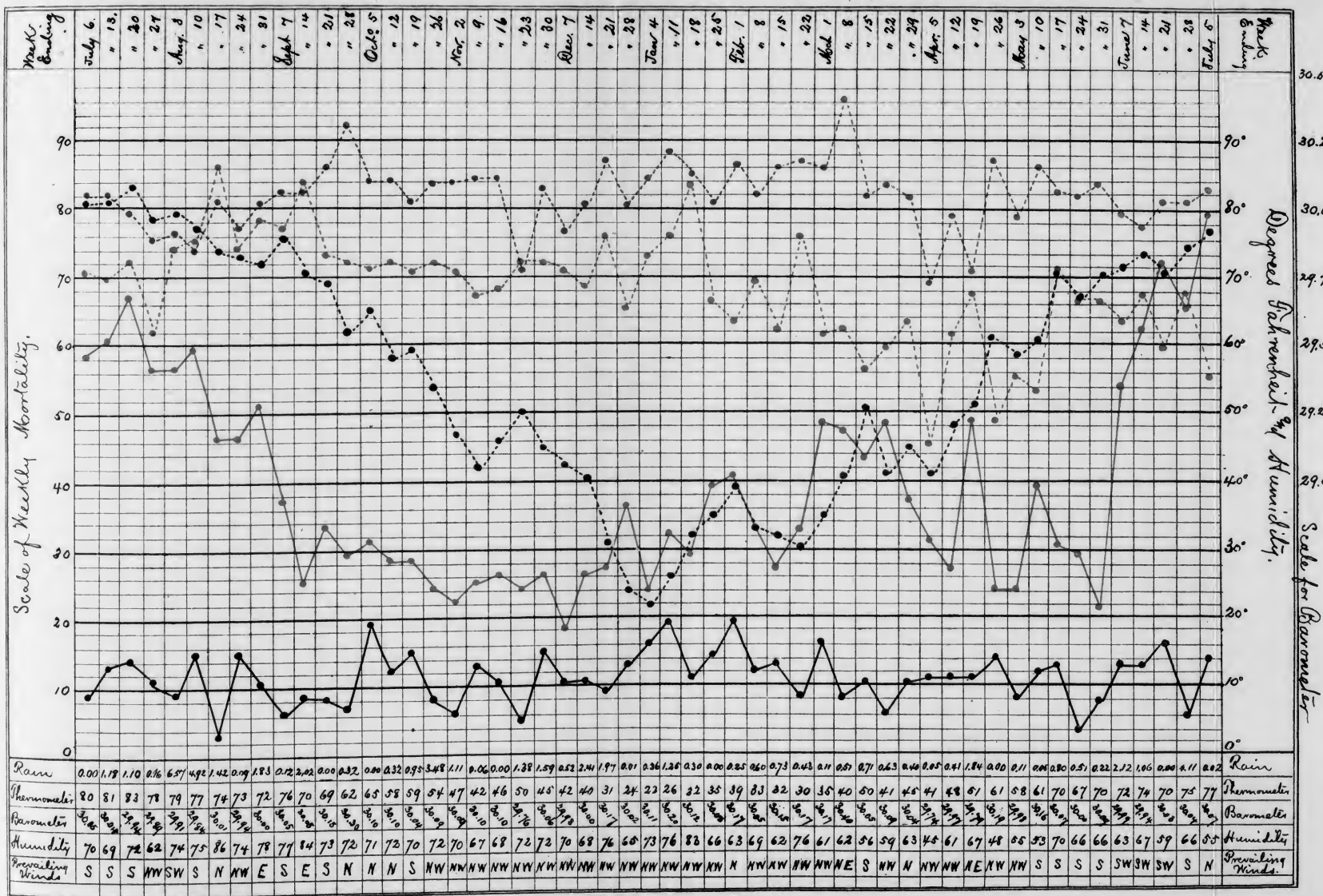




TABLE XVII.—Showing total deaths and death-rate by color, number of decedents under one year, under five years, and sixty years of age and over, together with the principal causes from which these deaths have resulted; also the number of births, marriages, and still-births, stated by months, with rate per 1,000 for each, from September, 1874, to June, 1879, inclusive.

Months.	Total deaths.			Number of deaths from—												Cerebro-spinal fever.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
	Number of deaths.	Rate per 1,000, white population.	Colored.	No. deaths under 1 year of age.			No. deaths under 5 years of age.			No. deaths 60 years of age and over.			Measles.				Scarlet fever.			Diphtheria.			Croup.			Whooping-cough.			Typhoid fever.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
				White.		Colored.	White.		Colored.	White.		Colored.	White.		Colored.		White.		Colored.	White.		Colored.	White.		Colored.	White.		Colored.	White.		Colored.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
				Rate per 1,000, white population.	Colored population.	Rate per 1,000, colored population.	White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.	White.		Colored.	White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
1874.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
September	130	13.56	147	39	20	39	57	55	92	18	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....</

TABLE XVII—Showing total deaths and death-rate by color, &amp;c.—Continued.

[illegible]



TABLE XVII.—Showing total deaths and death rate by color, &amp;c.—Continued.

Months.	Number of deaths from—						No. births reported.		No. marriages reported.		No. still-births.																		
	Diarrheal diseases.			Phthisis pulmonalis.			Diseases of the nervous system.		White.		Colored.		White.		Colored.														
	All ages.			Pneumonia.			Bronchitis.		White.		Colored.		White.		Colored.														
	Under 5 years.	White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.	Rate per 1,000 white population.	Number births.	Rate per 1,000 colored population.	Number marriages.	Rate per 1,000 white sons married.	Number marriages.	Rate per 1,000 colored population.	Number still-births.												
1874.	September.....	24	31	24	33	21	21	3	5	2	20	205	21	39	107	28	53	40	8	34	23	12	26	6	.63	9	2	40	
	October.....	7	9	14	13	31	18	11	7	1	24	251	26	19	109	29	67	60	12	52	32	17	66	14	1.46	14	4	53	
	November.....	3	3	9	6	12	23	9	2	4	19	232	24	21	123	27	47	40	8	34	31	16	54	17	1.77	17	3	73	
	December.....	2	1	3	2	20	22	18	2	6	27	232	24	21	124	33	63	43	8	38	28	14	94	14	1.46	22	5	87	
	Total.....	36	44	50	54	84	84	39	43	7	13	91	926	24	16	443	29	53	183	9	54	114	15	20	51	1.33	62	4	13
1875.	January.....	1	1	3	1	33	24	41	40	.....	33	222	23	16	117	31	20	33	6	88	21	11	20	9	.94	16	4	27	
	February.....	1	2	2	3	26	44	30	36	4	23	160	16	69	118	31	47	20	4	17	27	13	40	15	1.56	12	3	20	
	March.....	4	4	4	2	39	21	40	48	4	36	206	21	48	113	30	13	22	4	69	29	13	24	9	.94	18	4	80	
	April.....	5	4	6	2	22	31	19	27	4	3	189	19	72	86	22	93	28	5	84	27	14	40	10	1.04	18	4	80	
	May.....	4	2	7	2	27	29	6	13	3	27	204	21	28	129	34	40	20	4	17	20	10	67	11	1.13	24	6	40	
	June.....	56	62	60	69	30	20	6	9	3	9	29	36	183	19	69	32	53	38	7	93	29	13	13	1	1.36	23	1	13
	July.....	61	65	65	78	17	16	1	3	9	1	38	24	213	22	121	39	37	30	6	29	17	10	13	8	.83	21	5	60
	August.....	22	50	69	57	19	20	3	12	.....	.....	32	31	211	22	101	139	37	30	2	26	19	14	13	15	1.56	17	4	53
	September.....	7	29	26	33	24	31	9	15	2	3	26	248	25	88	125	34	13	28	5	84	31	6	53	12	1.25	21	5	66
	October.....	9	7	11	11	23	27	9	12	.....	.....	29	213	22	82	125	33	33	28	5	84	48	55	60	18	1.88	19	5	66
	November.....	2	4	2	4	26	14	12	16	4	3	18	22	20	87	121	32	27	41	8	55	42	22	40	16	1.67	18	4	80
	December.....	3	3	4	4	18	23	22	20	5	2	18	27	269	24	94	125	33	33	24	5	01	44	23	47	16	1.67	22	5
Total deaths, 1875.	161	227	255	264	304	300	190	248	30	47	330	329	2,488	21	55	1,454	32	31	323	5	62	304	16	18	132	1.32	229	5	09
1876.	January.....	1	1	1	1	41	17	37	25	3	17	243	25	35	179	45	73	27	5	63	44	23	47	11	1.15	22	5	87	
	February.....	1	1	1	2	32	37	23	29	5	15	24	249	25	98	167	44	53	39	8	14	21	11	20	7	.73	16	4	27
	March.....	1	1	1	3	31	18	40	38	40	5	28	27	211	22	01	170	45	33	37	7	72	39	20	8	.83	27	7	20
	April.....	1	1	1	1	34	22	44	6	5	19	13	193	20	14	150	40	00	14	2	92	22	11	73	7	.73	19	5	06
	May.....	5	3	8	3	22	22	15	26	2	2	30	195	20	35	151	40	37	19	3	96	38	20	27	13	1.36	16	2	27
	June.....	93	75	97	81	22	23	2	6	3	23	37	209	21	81	142	37	87	30	6	26	29	10	67	8	.83	22	5	87
	July.....	79	86	79	86	25	26	4	3	2	70	38	198	20	66	139	37	07	49	4	17	29	10	67	16	1.67	29	7	47
	August.....	41	47	48	53	12	26	5	6	3	2	37	250	26	08	136	36	27	20	10	23	33	17	60	9	.94	13	3	47

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September.....	20	31	26	34	22	19	3	11	2	1	27	27	200	20.87	135	36.00	20	4.17	33	17.60	11	1.46	11	3.75
October.....	20	31	26	34	22	25	8	8	3	3	21	38	200	20.87	131	40.27	24	4.38	50	16.00	10	1.04	24	6.10
November.....	20	31	26	34	22	30	13	13	6	7	14	19	212	20.76	130	34.67	24	3.84	26	13.87	18	1.88	18	4.80
December.....	20	31	26	34	22	20	15	16	6	7	23	19	199	20.76	129	32.00	24	3.01	43	22.93	14	1.46	17	4.33
Total deaths, 1876.....	241	257	274	283	324	300	161	236	46	42	314	328	2,559	22.25	1,770	39.33	328	5.70	369	16.40	135	1.17	236	5.24
1877.																								
January.....	1	2	2	3	23	21	30	28	5	4	16	20	245	25.56	182	48.53	24	5.01	18	9.60	13	1.36	23	6.13
February.....	1	2	1	2	34	23	19	42	2	10	24	25	185	19.30	143	38.13	22	4.60	7	3.73	11	1.15	18	4.80
March.....	3	1	6	3	26	23	23	31	2	5	31	24	167	17.42	161	42.93	18	3.68	45	24.00	7	.73	13	3.47
April.....	1	1	1	1	28	24	14	19	9	19	19	26	138	14.40	109	29.07	22	6.68	18	9.60	9	.94	15	4.00
May.....	1	1	1	1	34	20	7	18	5	1	24	21	159	16.59	145	38.67	23	4.89	24	12.80	10	1.04	27	7.20
June.....	41	55	46	62	19	35	5	13	1	.....	33	41	169	17.63	117	31.20	21	3.96	18	9.60	14	1.46	23	6.13
July.....	30	80	50	83	19	30	.....	6	.....	3	40	38	182	18.99	103	51.47	21	4.38	20	10.67	14	1.46	23	6.13
August.....	36	46	39	53	20	26	2	5	1	.....	24	31	174	18.15	170	45.33	21	2.29	14	7.47	13	1.36	16	4.27
September.....	13	15	16	16	25	19	1	4	.....	.....	22	22	193	20.14	140	37.33	28	5.84	18	9.60	9	.94	18	4.80
October.....	5	8	9	11	31	22	3	10	1	24	22	24	232	25.37	165	44.00	23	4.89	27	14.40	10	1.04	21	5.60
November.....	1	5	4	5	25	22	7	15	.....	2	21	19	209	21.81	146	38.93	34	7.09	27	11.20	10	1.04	21	5.60
December.....	1	3	3	3	35	27	6	20	3	4	17	20	201	20.97	129	32.00	29	6.05	28	14.93	8	.83	16	4.27
Total deaths, 1877.....	152	217	188	242	319	302	117	211	29	49	295	308	2,246	19.53	1,791	39.80	284	4.94	258	11.47	128	1.13	229	5.09
1878.																								
January.....	3	.....	5	.....	37	44	23	26	3	5	19	30	225	23.68	149	31.93	94	19.79	17	7.27	10	1.06	16	3.43
February.....	1	1	1	1	32	26	16	21	3	3	25	27	203	21.36	149	31.93	94	19.79	17	7.27	10	1.06	16	3.43
March.....	3	2	6	2	36	34	16	34	3	2	43	25	191	20.10	130	27.86	93	6.95	13	5.86	14	1.48	22	4.72
April.....	3	1	3	3	32	36	17	20	3	1	19	31	161	16.94	118	25.28	93	6.95	13	5.86	14	1.48	22	4.72
May.....	30	17	32	19	21	32	9	25	2	4	25	29	149	15.68	110	23.58	22	4.05	20	8.57	17	1.79	23	4.93
June.....	39	46	46	47	21	32	9	25	2	6	36	41	122	12.84	114	24.43	12	2.53	18	7.71	13	3.22	27	5.78
July.....	28	65	35	70	25	34	7	13	.....	.....	43	40	134	14.10	135	25.93	16	3.37	14	6.00	8	1.26	20	4.28
August.....	28	46	37	55	35	33	7	10	.....	.....	23	36	169	17.78	166	35.58	45	9.58	12	5.14	16	1.08	20	4.28
September.....	5	12	15	26	33	9	10	3	2	13	26	19	199	19.69	140	30.00	45	9.58	12	5.14	16	1.08	20	4.28
October.....	5	10	12	11	27	17	7	10	3	2	20	27	205	20.52	142	30.43	41	8.63	18	7.71	6	.63	22	4.72
November.....	1	3	3	2	36	18	11	20	3	4	24	16	206	21.98	136	29.15	84	17.68	22	9.43	10	1.26	20	4.28
December.....	1	2	3	2	31	30	12	18	6	4	20	28	201	21.26	144	30.86	60	12.63	26	11.14	10	1.26	24	5.15
Total deaths, 1878.....	146	205	190	227	359	364	149	243	31	33	310	346	2,146	18.82	1,633	29.17	440	7.72	179	6.40	146	1.28	262	4.30
1879.																								
January.....	2	.....	6	1	29	23	22	34	6	3	24	24	203	21.36	165	35.36	56	11.79	26	11.14	11	1.15	21	4.50
February.....	1	2	5	3	29	29	20	34	2	4	20	24	195	20.52	137	29.36	40	8.42	4	.71	6	.64	24	5.15
March.....	1	2	1	2	32	37	30	47	6	18	18	15	165	17.42	138	29.58	38	8.00	21	9.00	11	1.15	27	5.78
April.....	1	1	3	2	30	33	19	30	2	12	24	16	146	15.36	112	24.00	48	10.11	16	6.87	10	1.06	13	2.78
May.....	4	1	7	2	19	33	9	29	.....	.....	20	22	160	16.84	162	34.72	43	9.05	18	7.71	12	1.26	21	4.50
June.....	68	48	78	51	28	41	3	10	2	1	33	35	153	16.10	122	26.15	35	7.37	10	4.29	10	1.06	28	6.00
Total deaths.....	76	54	100	61	177	196	103	184	18	43	139	136	1,022	17.93	836	29.86	260	9.04	95	6.80	60	1.05	134	4.79
Grand total.....	812	1,004	1,057	1,131	1,567	1,546	759	1,165	161	227	1,479	1,532	11,387	20.61	7,927	34.11	1,818	6.58	1,379	11.87	672	1.22	1,151	4.95

TABLE XVII.—*Showing total deaths and death-rate by color, &c.*—Continued.

NOTE.—The death-rate is based upon the following estimated population:

Years.	Total.	White.	Colored.
1874.....	150,000	109,867	40,133
1875-76-'77.....	160,000	115,000	45,000
1878-'79.....	170,000	114,000	56,000



## STILL-BIRTHS.

Table XVIII shows the number of still-births occurring in the District of Columbia for the year ending June 30, 1879, classified as to color and sex, showing the number of legitimate, illegitimate, and foundlings, the period of utero-gestation, the number attended by physicians, midwives, and also those investigated and certified to by the coroner, and the percentages of each class and division to the total number.

TABLE XVIII.—STILL-BIRTHS.—*Showing color, sex, legitimacy, period of utero-gestation and by whom attended, with percentages of still-births occurring in the District of Columbia, for the year ending June 30, 1879.*

Color and sex.	Legitimacy.			Period of utero-gestation.							By whom attended.		Coroner's cases.	Total.	Percentage to total number of still-births.
	Legitimate.	Illegitimate.	Unknown.	4 months.	5 months.	6 months.	7 months.	8 months.	9 months.	Unknown.	Physician.	Midwife.			
White males .....	57	5	2	3	4	3	7	14	31	2	48	12	4	64	16.20
White females .....	55	1	10	3	2	7	8	13	31	2	50	7	9	66	16.71
Colored males .....	103	44	14	3	10	26	20	17	73	12	46	70	45	161	40.76
Colored females .....	68	26	10	1	3	15	15	19	44	7	41	42	21	104	26.33
Total .....	283	76	36	10	19	51	50	63	179	23	185	131	79	395	100.
Percentage ..	71.65	19.24	9.11	2.53	4.81	12.91	12.66	15.95	45.31	5.83	46.84	33.16	20.	100.	.....

NOTE.—The column of the "Unknown" legitimacy represents also the number of foundlings picked up by the police and others.

There were 395 still-births registered during the year. In each of these cases, except in a few where the information could not be obtained, the record shows name and nativity of father and mother, residence of mother, period of utero-gestation, date of birth, sex, color, cause of still-birth, name and address of physician, midwife, or coroner certifying to same, where, when, and by whom buried. Of the total number, 64 were white males, or 16.20 per cent.; 66 white females, or 16.71 per cent.; 161 colored males, or 40.76 per cent.; and 104 colored females, or 26.33 per cent.; that is, 32.91 per cent. of the whole were whites and 67.09 per cent. colored, more than two-thirds of the total being colored. The percentage of the legitimate is 71.65; illegitimates, 19.24; unknown, 9.11. In examining the number belonging to each of the two races we find the percentage of illegitimates for the whites to be 4.62 to their total, and for the colored 26.41. If among the illegitimates are included the "unknown" (where they undoubtedly belong), we shall have a percentage of 28.35 to the total, divided as to race as follows: White, 4.56; colored, 23.79; and, as to each class, there are of the whites 13.85 per cent. to their total number, and for the colored 35.47. This gives a percentage to the total of 19.23 more to the colored than the whites.

In the second division of this table, showing the period of utero-gestation, many interesting items may be noted. For instance, there were 179, or 45.31 per cent., of nine months' or full term; 63, or 15.95 per cent., eight months; 50, or 12.66 per cent., 7 months; 51, or 12.91 per cent., 6 months; 19, or 4.81 per cent., 5 months; and 10, or 2.53 per cent., 4 months. There were also 23, or 5.83 per cent., that the period of utero-gestation was not given. It is somewhat surprising that so large a proportion should be born dead at the "full term," and more especially as delivery is but a physiological process of nature, and, therefore, has nothing in

and of itself that should be destructive to life. Among a total of 130 white children still-born 62, or 46.9 per cent., were of "full term," and of the colored, out of a total of 265, 117, or 44.15 per cent., showing the per cent. of the whites to be above the colored 2.75.

From the certificates the following information is obtained in regard to those still-births of nine-months' utero-gestation: 95 (white 53, colored 42) were attended by physicians, 50 (white 8, colored 42) were attended by midwives, and 34 (white 1, colored 33) were reported by the coroner. As to some of the principal causes of these still-births, the physicians furnish the following: Not stated or unknown, 39; prolonged or difficult labor, 14; prolapsed cord, 8; overwork and injury to mother, 4; compression of cord, 2; malpresentation, 7; premature detachment of placenta, 3; ante-partum hemorrhage, 2; puerperal convulsions, 1; uterine inertia, 2; disease of mother, 2; placenta previa, 1. The midwives report the following: Not stated or unknown, 33; injury to mother, 11; difficult or prolonged labor, 2; fright, 2. The coroner reports as follows: Unknown and not stated, 22; neglect, 4; overwork and injury to mother, 3; neglect of mother (being unattended), 2. It will be seen by these figures that of the total number, 179, at full term, in 94 no cause for the same is given, or stated as "unknown." Sixteen of the children owed their death to *difficult* or *prolonged* labor, and 14 of these were reported by physicians. It is but fair, however, to state that the certificates in a number of these cases inform us that the physicians were not called to see the cases until the last moment, and one says on the third day of labor. The certificates, however, fail to state whether the women were being attended by a midwife or not during this unjustifiable, if not criminal, delay. The table also shows that the physicians attended 185, or 46.84 per cent., of these cases; the midwives 131, or 33.16 per cent.; and the coroner investigated (and always after birth and death) 79, or 20 per cent.

Table XIX shows in detail the causes, percentages, &c., of all the still-births. It will be seen that for over one-half the cause is stated as unknown.

TABLE XIX.—STILL-BIRTHS.—Showing causes of still-births, with percentages, in the District of Columbia, reported during the year ending June 30, 1879.

Cause.	White.		Colored.		Total.	Percentage.
	Male.	Female.	Male.	Female.		
Unknown or not stated.....	34	34	89	65	222	56.20
Difficult or prolonged labor.....	6	3	4	3	16	4.05
Placenta previa.....	2	1	2	5	10	2.53
Injury to mother and overwork.....	3	3	30	23	59	14.93
Disease of mother.....	2	1	3	4	10	2.53
Fright of mother.....	2	1	3	1	7	1.77
Premature labor.....	5	3	12	2	22	5.57
Premature ossification of skull.....	1	1	1	1	4	1.01
Malpresentation.....	1	2	4	1	7	1.77
Prolapsus funis.....	2	6	3	11	20	5.06
Puerperal convulsions.....	1	2	1	2	5	1.27
Ante partum hemorrhage.....	1	1	1	1	4	1.01
Disease of placenta.....	1	1	1	2	5	1.27
Premature detachment of placenta.....	1	1	2	4	8	2.05
Dropsy of amnion.....	1	1	1	2	5	1.27
Cord around neck.....	1	1	1	1	4	1.01
Congenital debility.....	1	1	1	1	4	1.01
Malformation.....	1	1	1	1	4	1.01
Neglect of mother.....	1	1	1	1	4	1.01
Inertia of uterus.....	1	1	1	1	4	1.01
Uremic convulsions.....	1	1	1	1	4	1.01
Compression of funis.....	1	1	3	5	9	2.24

TABLE XIX.—STILL-BIRTHS, &amp;c.—Continued.

Cause.	White.		Colored.		Total.	Percentage.
	Male.	Female.	Male.	Female.		
Hydrocephalus .....		1			1	.25
Twin birth .....	1				1	.25
Craniotomy .....			1		1	.25
Deformed pelvis .....		1			1	.25
Total by sex .....	64	66	161	104	395	100.
Total by color .....	130		265			
Percentage .....	32.91		67.09		100.	

Table XX shows the same as table 19 for the time between September 1, 1874, to June 30, 1878 inclusive.

TABLE XX.—STILL-BIRTHS.—Showing legitimacy, period of utero-gestation, by whom reported, and cause of still-birth, by color and sex, from September 1, 1874, to June 30, 1878.

	White.			Colored.			Total.
	Male.	Female.	Total.	Male.	Female.	Total.	
Legitimacy:							
Legitimate .....	277	216	493	291	280	571	1,064
Illegitimate .....	11	6	17	143	100	243	260
Unknown .....	16	26	42	41	40	81	123
Sex and color unknown .....							9
Period of utero-gestation:							
Fourth month .....	15	3	18	20	9	29	47
Fifth month .....	25	17	42	29	19	48	90
Sixth month .....	29	32	61	46	51	97	158
Seventh month .....	33	31	64	76	59	135	199
Eighth month .....	37	36	73	76	79	155	228
Ninth month .....	148	116	264	206	174	380	644
Unknown .....	17	13	30	31	29	60	90
How reported:							
Physician .....	239	195	434	317	270	587	1,021
Midwife .....	49	28	77	116	111	227	304
Coroner .....	16	25	41	51	39	90	131
Cause:							
Unknown .....	104	73	177	121	118	239	416
Not stated .....	68	63	131	124	106	230	361
Mal-presentation .....	9	5	14	3	1	4	18
Difficult and prolonged labor .....	17	14	31	24	11	35	66
Overwork and injury to mother .....	21	19	40	128	105	233	273
Fright .....	5	1	6	8	8	16	22
Craniotomy .....	2		2	1	2	3	5
Breach presentation .....	10	3	33	1	5	6	19
Shoulder presentation .....	1	2	3	1	1	2	5
Prolapsus of funis .....	2	5	7	6	3	9	16
Placenta previa .....	7	6	13		5	5	18
Compression of cord .....	11	11	22	8	8	16	38
Ante partum convulsions .....		1	1				1
Disease of mother .....	17	10	27	21	15	36	63
Premature birth .....	6	11	17	12	15	27	44
Neglect at birth .....		1	1	4	4	8	9
Disease of placenta .....	4	2	6	1	1	2	8
Twin birth .....				1		1	1
Cord around neck .....	1	4	5	1	2	3	8
Miscarriage .....	3	2	5				5

TABLE XX.—STILL BIRTHS, &amp;c.—Continued.

Cause—Continued.	White.			Colored.			Total.
	Male.	Female.	Total.	Male.	Female.	Total.	
Detachment of placenta (premature).....	5	4	9	9	5	14	23
Dropsy of cord.....		12	12				12
Disease of fetus.....	4	3	7				
Monstrosity.....				1		1	1
Hemorrhage.....	3	12	15	4		4	9
Criminal abortion.....					1	1	1
Contracted pelvis.....				3	2	5	5
Hydrocephalus.....	1	12	13	1		1	4
Congenital debility.....	12		12		1	1	3
Foot presentation.....	1	12	13		1	1	4
Ante partum hemorrhage.....				1		1	1

## BIRTHS.

Tables XXI to XXVII give varied and extensive information relative to the 3,816 births reported during the year. The record of births shows name and nativity of father and mother, date of birth, sex, color, number of children the mother has given birth to, place of birth, mother's maiden name, father's occupation, and name and address of certifying physician or midwife in each case.

Of the total number of births reported, 1,097 were white males, 1,020 white females; 885 colored males, and 814 colored females; showing an annual birth-rate of 18.57 per 1,000 for the white, and 30.16 for the colored population, a percentage of 11.59 per 1,000 in favor of the colored population. In comparing these births with the deaths for the same time, we find that the number of deaths exceed the number of births by 493, the white population showing a decrease of 79 (males 33, females 46); the colored a decrease of 414 (males 166, females 248). It must be remembered, however, that the report of births is in no wise complete, and especially is this true of the births of white children. As proof of this, let us compare the reports of births from the two races in this District. The whites are more than double the colored in population, and reckoning on this basis, that is, that the births among the colored are complete, we should have double the number of whites to that of the colored, or 3,398 instead of 2,117, which were received, making a difference of 1,281 births of white children not reported to this office, according to the requirements of the law. So the percentage of the births of white children that are received is but 62.3 of the total number. It is sometimes said that the colored women bear more children than the white; this statement, however, is not sustained by the figures in Table XXII. The average number borne by the white female being 3.87, and by the colored but 3.8, or .07 of 1 in favor of the white. To make this more apparent, let us compare the total number of children borne by 1,000 white women during the child-bearing period with the same number of colored women. This number of white women will have 3,870 children; the colored 3,800, or 70 in favor of the white women.

Taking for granted that these calculations are correct, and that the actual number of births of white children was 3,398, this would show a birth-rate of 29.81 per 1,000 of the white population instead of 18.57, and that the white population has increased by excess of births over deaths by 1,202 instead of decreasing by 79, as shown above. Even in this

estimate we are probably below the actual figures, as the ratio of the colored to the white is about  $2\frac{1}{2}$  instead of 2, as calculated above.

It will be seen by this table that of the total accouchements (2,091) of the white women reported, 1,153, or 55.14 per cent., were attended by physicians, and 938, or 44.86 per cent., were attended by midwives; and of the colored women, 231, or 13.75 per cent., were attended by physicians, and 1,446, or 86.02 per cent., by midwives (there being four cases unattended by either). Of the total number of accouchements 1,384, or 36.69 per cent., were attended by physicians, and 2,384, or 63.2 per cent., by midwives, showing that the midwives reported 1,000 more births during the year than the physicians.

It will be seen what a large proportion of this very important part of the practice of medicine is done by the various so-called midwives of this District.

Very many of these women are ignorant of the requirements of their position, and doubtless many women and children are sacrificed every year through *their* ignorance or neglect, while many of the mothers arise from their beds of sickness to find themselves the victims of some uterine or other trouble that proper information and forethought on the part of their attendants would have prevented. Before the physician, or rather the would-be physician, can obtain the vote of the professor of midwifery he must pass an acceptable examination. But here in this District any old crone may announce herself as a midwife and ladies' nurse without let or hinderance.

A large majority of these midwives are unable to read or write, and are impregnated with all manner of superstitious and antiquated ideas. I think a properly constructed law regulating the practice of midwifery in this District would work great good to the community, and the attention of Congress should be called to the necessity therefor.

The number of white male children outnumber the female by 77; or, in 1,000 children, 518 are males and 482 females, a difference of 36. Of the colored the males outnumber the females by 71; or, in 1,000 children, 521 are males and 479 females, a difference of 42.

Of twin births there were 44, 26 white and 18 colored. In 7 cases, or 26.93 per cent. of the whites, both children were males; in 9, or 34.61 per cent., both were females; and in 10, or 38.46 per cent., one was male and the other female. Of the colored twins, in 5 cases, or 27.78 per cent., both children were males; in 6, or 33.33 per cent., both were females; and in 7, or 38.89 per cent., one was male and the other female. In 1,000 births of white children, according to these figures, there will be a fraction over 12 pairs of twins, and in 1,000 births of colored children there will be nearly 11, being more than one pair in 1,000 births of each of the two races in favor of the white, and in 1,000 pairs of twins there would be for the whites 269 both males, 346 both females, and 385 one of each sex. In the same number of births of colored twins there would be 278 both males, 333 both females, and 389 one of each sex.

Of 52 children born to the white mothers by these twin births, 24 were males and 28 were females. Of the 36 colored children thus born, 17 were males and 19 were females, showing an excess of females.

Table XXIII shows the number of births, &c., by the month and quarter. As usual, in such tables, the fourth quarter of the calendar year furnishes the largest number of births. Table XXII shows, according to nativity and color, the number of children each mother has borne and the average. The total number of white mothers who have borne but one child is 451 out of a total of 2,091, or 21.57 per cent. The number of colored mothers who have borne but one child is 399, or 23.73 per

cent. of their total. One white mother has borne 22 children. In the column of average number of children, the mothers born in Germany are the highest, 5.15; and those born in British America are the lowest, 3.13. The Irish mothers are .13 of 1 below the German mothers. The American born mothers, white, are next to the lowest, they averaging but 3.61.

Table XXIV treats of illegitimacy, and furnishes some interesting facts. There were 49, or 2.31 per cent., of the total white births illegitimate; and 299, or 17.59 per cent., colored reported, showing nearly eight times as much bastardy among the colored as among the whites. There were 2 pairs of twins among the colored. Of the white mothers of these bastards the United States is responsible as the birth-place of 44, Ireland 3, Germany 1, and British America 1; 42 were of the first, 5 of the second, and 1 each of the third and fourth confinement. Of the total of 454 first confinements 42, or 9.25 per cent., were illegitimate, and of the second confinements 1.41 per cent. were illegitimate. Of the 401 first confinements of colored women 151, or 37.65 per cent., were illegitimate; of second confinements, 26.26 per cent.; of third, 12.36; of fourth, 6.06 per cent. In one case the fourteenth child was illegitimate. The certificate in this case, as well as in all the others, does not state whether those born before were legitimate or illegitimate.

Table XXV gives the nativities of the parents of white children. No table of the nativities of the parents of colored children was prepared for the reason that not over 6 of them all were born out of the United States, and nearly all of the District of Columbia, Virginia, and Maryland.

This table shows that 1,607 of the mothers and 1,524 of the fathers were natives of the United States; 203 mothers and 190 fathers of Ireland; 36 mothers and 67 fathers of England, Scotland, and Wales; 155 mothers and 212 fathers of Germany; 14 mothers and 16 fathers of British America; and 27 mothers and 33 fathers of all other countries. Both parents in 1,417 accouchements were natives of the United States; 134 of Ireland; 10 of England, &c; 133 of Germany; 3 of British America, and 13 of all other countries. Expressed in percentages 69.34 per cent. of the births both parents were natives of the United States, 6.56 of Ireland and Germany each, and 0.49 of England, Scotland, and Wales. Further condensing, 83.35 per cent. were of unmixed and 16.65 per cent. of mixed national parentage.

TABLE XXI.—BIRTHS.—Showing number of births and twin-births, according to color and sex, together with manner of attendance at accouchment and the number unattended reported during the year ending June 30, 1879.

Color.	Number of births.			Sex of twins.				By whom attended.			
	Male.	Female.	Total.	Males.	Females.	Males and females.	Total.	Physician.	Midwife.	Unattended.	Total.
White.....	1,097	1,020	2,117	7	9	10	26	1,153	938	.....	2,091
Colored.....	885	814	1,699	5	6	7	18	231	1,446	4	1,681
Total.....	1,982	1,834	3,816	12	15	17	44	1,384	2,384	4	3,772

TABLE XXII.—*BIRTHS.*—Showing the nationality of mothers, together with total number of children born, and average number for each (reported) during the year ending June 30, 1879.

Nationality of mothers.	Number of children.																				Total number of mothers.	Total number of children.	Average number of children for each mother.		
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.				22.	
United States (white).....	390	5314	4268	*201	*150	*96	*73	*57	*40	*24	15	9	5	1	.....	2	.....	1	.....	1	.....	1	1,647	5,943	3.61
Ireland.....	25	21	29	*22	*25	*18	*29	*13	*10	3	6	3	.....	1	.....	*1	.....	.....	.....	.....	.....	206	1,034	3.02	
England, Scotland, and Wales.....	5	6	6	5	6	3	1	1	.....	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	36	149	4.14		
Germany.....	22	10	13	*28	*26	14	9	9	9	4	6	4	2	.....	.....	.....	.....	.....	.....	.....	156	803	5.15		
British America.....	3	2	4	3	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15	47	3.13		
All other countries.....	6	6	6	3	2	3	3	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	31	113	3.65		
Total white mothers.....	451	359	326	262	211	135	115	82	59	33	28	16	7	2	.....	3	.....	1	.....	.....	2,091	8,089	3.87		
Total colored mothers.....	399	4316	5253	164	1180	†108	†73	†64	*35	*28	21	*10	16	5	5	2	1	.....	.....	1	.....	1,681	6,385	3.8	
Grand total.....	850	675	579	426	391	243	188	146	94	61	49	26	23	7	5	5	1	1	.....	1	.....	3,772	14,474	3.86	

One pair twins.

† Two pair twins.

; Three pair twins.

§ Five pair twins.

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TABLE XXIII.—BIRTHS.—*Statement of births by months and quarters, given according to race and sex, with an enumeration of twin-births and illegitimate children reported during the year ending June 30, 1879.*

Months and quarters.	White.			Colored.			Total.	Twins.		Bastards.	
	Male.	Female.	Total.	Male.	Female.	Total.		White.	Colored.	White.	Colored.
July, 1878 .....	72	62	134	68	67	135	269	1	2	2	17
August, 1878 .....	83	86	169	82	84	166	335	4	3	8	27
September, 1878 .....	88	102	190	79	61	140	330	2	1	3	21
Total first quarter .....	243	250	493	229	212	441	934	7	6	13	65
October, 1878 .....	99	96	195	77	65	142	337	5	1	1	33
November, 1878 .....	109	97	206	76	60	136	342	2	2	2	24
December, 1878 .....	110	91	201	79	65	144	345	2	2	4	26
Total second quarter .....	318	284	602	232	190	422	1,024	9	5	7	83
January, 1879 .....	106	97	203	88	77	165	368	1	.....	2	34
February, 1879 .....	104	91	195	73	64	137	332	1	1	6	21
March, 1879 .....	87	78	165	63	75	138	303	4	2	3	25
Total third quarter .....	297	266	563	224	216	440	1,003	6	3	11	80
April, 1879 .....	64	82	146	50	62	112	258	1	2	6	21
May, 1879 .....	93	67	160	84	78	162	322	2	1	6	26
June, 1879 .....	82	71	153	66	56	122	275	1	1	6	24
Total fourth quarter .....	239	220	459	200	196	396	855	4	4	18	71
Total for year .....	1,097	1,020	2,117	885	814	1,699	3,816	26	18	49	299

TABLE XXIV.—BIRTHS.—*Showing nationality of mothers of illegitimate children, together with number of mothers and total number of children borne by each, reported during the year ending June 30, 1879.*

Nationality of mothers.	Number of children.													Total number of mothers.	Total number of illegitimate children.
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.		
United States (white) .....	38	5	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	44	44
Ireland .....	2	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	3
Germany .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
British America .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Colored .....	150	*82	*32	10	9	7	3	1	1	1	.....	.....	1	297	299
Total .....	192	87	33	11	9	7	3	1	1	1	.....	.....	1	346	348

\* One pair twins.



# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 303

TABLES XXV and XXVI.—BIRTHS.—*Showing nativity of white parents of legitimate children reported during the year ending June 30, 1879.*

Birthplaces of white fathers.	Birthplaces of white mothers.						Total.
	United States.	Ireland.	England, Scotland, and Wales.	Germany.	British America.	All other countries.	
United States.....	1, 417	49	22	19	8	9	1, 524
Ireland.....	51	134	2	1	1	1	190
England, Scotland, and Wales.....	40	13	10	1	2	1	67
Germany.....	71	3	2	133	.....	3	212
British America.....	12	1	.....	.....	3	.....	16
All other countries.....	16	3	.....	1	.....	13	33
Total.....	1, 607	203	36	155	14	27	2, 042

Birthplaces of white fathers.	Birthplaces of white mothers.						Total.
	District of Columbia.	New England.	Middle States.	Maryland and Virginia.	Other parts United States.	Foreign countries.	
District of Columbia.....	327	7	40	154	20	34	582
New England.....	19	24	14	12	6	3	78
Middle States.....	85	4	89	43	12	29	262
Maryland and Virginia.....	154	4	26	229	20	29	462
Other parts United States.....	18	5	13	25	68	10	139
Foreign countries.....	66	6	40	56	21	330	519
Total.....	669	50	222	519	147	435	2, 042

TABLE XXVII.—BIRTHS.—*Showing the number of births reported from the different hospitals in the District of Columbia during the year ending June 30, 1879.*

Hospitals.	White.	Colored.	Total.
Columbia Hospital.....	21	29	50
Freedmen's Hospital.....	5	38	43
Saint Ann's Infant Asylum.....	21	.....	21
Washington Asylum Hospital.....	5	13	18
Government Insane Asylum.....	1	.....	1
Barnes Hospital (Soldiers' Home).....	1	.....	1
United States Arsenal.....	1	.....	1
Total.....	53	80	133

Table XXVII, showing the number of births reported from the different hospitals, &c., needs no special comments.

The location of births among the different divisions of the city will be found in Table IX.

## MARRIAGES.

The number of marriages reported during the year ending June 30, 1879, was 712, an increase of 173 over the number reported for the preceding twelve months.

In each of these cases the following items are shown by the record, except in a few where the certifying clergyman has neglected to complete the information desired, viz, date of marriage, name, age, color, nativity, residence, number of marriage of bride and groom, occupation of groom, certification of contracting parties and name, address, and official station of clergymen solemnizing the ceremony.

Of these 712 marriages, 516 were of parties both of whom were white, 193 both of whom were colored, and 3 one white and the other colored.

Table XXVIII shows the nativity of the white grooms and brides. No table of nativity for the colored was prepared for the reason that but three or four were born outside the United States.

This table informs us that there were 396 grooms and 435 brides natives of the United States; 18 grooms and 13 brides natives of Ireland; 13 grooms and 2 brides natives of England, Scotland, and Wales; 21 grooms and 13 brides natives of Germany; 2 brides natives of British America; 59 grooms and 51 brides nativities not given; and 7 grooms and 2 brides natives of all other countries. Of the 396 grooms born in the United States, 385 married brides native of the United States, 3 of Ireland, 1 of England, Scotland and Wales, 5 of Germany, 1 nativity not given, and 1 native of another country. Of the 18 grooms born in Ireland, 9 married natives of the United States and 9 of Ireland. Of the 13 grooms born in England, Scotland, and Wales, 11 married natives of the United States, 1 of England, Scotland, and Wales, and 1 of a nativity not given. Of the 21 grooms born in Germany, 14 married natives of the United States and 7 of Germany. Of the 2 grooms born in British America, 1 married a native of the United States and 1 a native of Ireland. Of the 59 grooms whose nativities are not given, 10 married natives of the United States, and 49 married brides whose nativities are not given. Of the 7 grooms natives of all other countries, 5 married natives of the United States, 1 a native of Germany, and 1 a native of some other country. Of the total number of marriages, 385, or 74.61 per cent., were between parties both of whom were natives of the United States, and 18, or 3.49 per cent., both of whom were natives of foreign countries; 40 brides natives of the United States married grooms of foreign birth, and but 10 grooms natives of the United States married brides of foreign birth; 49, or 9.5 per cent., the nativity of neither the groom nor bride is given. It will be seen by the table that out of a total of 516 certificates, 61, or 11.82 per cent., were defective. Of the total there were first marriage for 364 grooms and 390 brides, and the first marriage of both parties in 346, and 16 bachelors married widows, and in 15 cases it was the second marriage of the bride, and in 1 the third. There were 65 widowers among the grooms, 37 of whom at their second marriage married spinsters, while 22 married widows; 21 at their second marriage, and 1 at her third; 2 at their third marriage married spinsters, and 1 a widow at her second marriage. It was the fourth marriage of 1 groom with a spinster, and the sixth marriage of 1 groom and the third of his bride.

It was the first marriage of 26 more brides than grooms; of the second marriage there were 60 grooms and 38 brides, or 22 more grooms than brides. The number of grooms and brides of the third marriage was the same, namely 3; there were no brides of more than the third marriage. The number of marriage is not stated in the cases of 85 brides and 87 grooms, showing from the table 90 defective certificates in this particular.

Three grooms and 97 brides were under 20 years of age; 146 grooms and 198 brides between 20 and 25 years; 141 grooms and 85 brides be-

TABLE XXXI AND XXXII.—MARRIAGES.—Showing ages of brides and grooms, classed according to color, for the year ending June 30, 1879.

Ages of grooms.	Ages of brides.																		Total.	
	Under 20 years.		20 to 25 years.		25 to 30 years.		30 to 40 years.		40 to 50 years.		50 to 60 years.		60 to 70 years.		Over 70 years.		Not given.			
	White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.		
Under 20 years	1	1	2	1																
20 to 25 years	50	23	83	29	9	2	1										3			
25 to 30 years	31	4	69	26	37	10	2	3	1								1	2		
30 to 40 years	13	3	40	13	31	14	28	6	4	1							1			
40 to 50 years	2	1	4	5	4	3	9	3	2	2										
50 to 60 years				1	4	1	5	4	2	3	1	2					1			
60 to 70 years							2		4	2										
Over 70											2									
Age not given																	65	26		
Total ..	97	32	198	75	85	30	47	16	13	8	4	4	1				71	28		

TABLE XXXIII.—MARRIAGES.—Showing the manner of signing the marriage certificates by contracting parties, for the year ending June 30, 1879.

How signed.	White.		Colored.		Total.
	Grooms.	Brides.	Grooms.	Brides.	
By writing .....	359	353	96	92	900
By mark .....	17	22	29	32	100
Not signed .....	140	141	68	69	418
Total .....	516	516	193	193	1,418

TABLE XXXIV.—MARRIAGES.—Showing number of marriages solemnized by clergymen of different denominations, for the year ending June 30, 1879.

Color.	Methodist.	Catholic.	Episcopal.	Presbyterian.	Lutheran.	Baptist.	Congregational.	Jewish.	Unitarian.	Swedenborgian.	Campbellite.	Middle Reform.	Total.
White .....	190	95	78	61	47	24	11	4	3	1	1	1	516
Colored .....	27	28		3		131	4						193
Total .....	217	123	78	64	47	155	15	4	3	1	1	1	709

NOTE.—There were three marriages reported during the year, being what are called mixed marriages. The groom was white in two cases and colored in one; the bride, *vice versa*. In one case in which the groom was white, both parties were natives of Virginia; the other case the groom was a native of Germany, the bride of South Carolina. In the case in which the groom was colored, he was a native of Maryland, the bride of Ireland. These three are not included in any of the tables.

## COMPLICATIONS OF DISEASES.

The following shows some of the complications of diseases given by the physicians in their certificates of death. The first figures indicate whites, the second colored decedents. Where but one number is given, white is meant, unless otherwise stated.

Scarlet fever, united with measles, 1; with diphtheria, 2; followed by uremia, 3; by diphtheria, 4—1; by anasarca, 5—2; congestion of the

lungs, 3—1; brain complications, 25—1; nephritis, 7—4; septicæmia, 2; bronchitis, 2 colored; dropsy, 2—2.

Pneumonia, preceded by whooping-cough, 12—24; measles, 8—7; malarial fever, 2—2; phthisis pulmonalis, 2—1; scarlet fever, 4—1; followed by phthisis pulmonalis, 10—12; brain complications, 6—11; gangrene of the lungs, 2—1; complicated with bronchitis, 8—5; pleurisy, 13—9; hemorrhage, 1; heart clot, 1; double, 9—3.

Measles, followed by diarrhœal diseases, 4—2; brain complications, 7—2; dropsy and anasarca, 1—2; diseases of the respiratory organs, 4—2.

Dentition, followed by brain complications, 14—24; diarrhœal diseases, 11—16; marasmus, 3 colored.

Diarrhœa and dysentery, produced by artificial feeding, 5—4; complicated with brain trouble, 7—8; followed by cholera infantum, 2—11; marasmus, 1—12.

Convulsions, with cholera infantum, 7—7; whooping-cough, 3—15; intermittent fever, 6—6; diarrhœa and dysentery, 5—7; ascarides, 1 colored; bronchitis, 1—4; croup, 1—1; catarrh, 5 colored; acute brain diseases, 15—9; tubercular meningitis, 5—6; followed by cerebral effusion, 9—2.

Typhoid fever, with hemorrhage of bowels, 2 colored; perforation, 2—1; relapse, 1; brain complications, 4—1.

Phthisis pulmonalis, preceded by scrofula, 1—3; complicated with diarrhœa, 2; hemorrhage, 8—14; bronchitis, 2; curvature of spine, 1.

Bronchitis, following whooping-cough, 4—3.

Embolism, from defect of heart, 4—2.

Rheumatism, with heart disease, 11—9.

Anasarca and dropsy, following heart disease, 12—21.

Puerperal hemorrhage, after use of instruments, 1.

Puerperal septicæmia, following retained placenta, 1; miscarriage, 1 colored.

One case of strangulated umbilical hernia, in a female (white) 50 years of age.

Four cases of trismus, produced by displacement of cranial bones.

#### ADDITIONS TO THE LIBRARY.

The following-named works, reports, and papers have been added to our library during the year:

Medical and Surgical History of the War. 3 vols.

Circulars 1, 2, 3, 4, 8, 9, and 10, Surgeon-General's Office. 7 vols.

Report of Commissioner of Education, 1876. Parts 1 and 2.

Report of Children's Hospital, 1878. 1 vol.

Index Medicus, a monthly classified record of the current medical literature of the world. 1 vol.

Conclusions of Board of Experts authorized to investigate the Yellow Fever Epidemic of 1878. 1 vol.

Report of Dr. E. O. Brown, in charge of yellow-fever hospital, Louisville, Ky. 1 vol.

Letter of Secretary of War to the President, January 15, 1879, relative to the sanitary condition of Washington, and for deepening river channel.

House Drainage and Water Service. Bayless. 1 vol. (purchased.)

Sanitary Examination of Water, Air, and Food. Fox. 1 vol. (purchased.)

Sanitarian, The, from January, 1879 (purchased.)

National Medical Review, from December, 1878 (purchased.)

Popular Science Monthly, from January, 1879 (purchased.)

Plumber and Sanitary Engineer, from January, 1879 (purchased.)

Thirty-eighth and Thirty-ninth Annual Reports of Registrar-General of England, 1875 and 1876. 2 vols.

Quarterly Returns of Registrar-General of England for 1878.

Weekly Returns of Registrar-General of England for January, 1879.

- Report of Health Department, Baltimore, 1878. 1 vol.  
 Report of Health Officer, Burlington, Vt., 1878. 1 vol.  
 Report of State Board of Health of Colorado, 1877. 1 vol.  
 Report of Health Officer, Rochester, N. Y., 1877 and 1878. 1 vol.  
 Report of Board of Health, Utica, N. Y., 1878. 1 vol.  
 Report of State Board of Health, Michigan. 1 vol.  
 Report of State Board of Health, Illinois. 1 vol.  
 First, Second, Third, Fourth, Fifth, Sixth and supplement, and Seventh and supplement, Annual Reports of the Local Government Board, London, England, for the years 1871-72 to 1877-78, inclusive. 8 vols.  
 Report of the Medical Officer of the Privy Council and Local Government Board, 1874. New Series No. 2. 1 vol.  
 Reports of the Medical Officer of the Privy Council and Local Government Board, 1874 and 1875. Nos. 4 and 5. 2 vols.  
 First Annual Report State Board of Health, Connecticut. 1 vol.  
 Annual Report Board of Health, Cambridge, Mass. 1 vol.  
 First Annual Report Board of Health, Buffalo, N. Y. 1 vol.  
 First Annual Report Commissioner of Health, Milwaukee, 1878. 1 vol.  
 Ninth and Tenth Annual Reports Eye and Ear Institute, Maryland, 1876 and 1878. 1 vol.  
 The Proceedings of Medical Society, county of Kings, New York, April, 1879. 1 vol.  
 Report of Health Department of Chicago, 1878. 1 vol.  
 First Annual Report of the Board of Health of the State of Rhode Island, 1879. 1 vol.  
 Bulletin de Statistiques Municipale, Paris.  
 First Annual Report of the Board of Health of the city of Somerville, Mass., 1879. 1 vol.  
 Twelfth Annual Report of Board of Health of Dayton, Ohio, 1879. 1 vol.  
 The Mayor's Address, together with Reports of City Officers of Annona, Ill., 1879.  
 Tenth Annual Report State Board of Health, Massachusetts, 1878. 1 vol.  
 Twelfth Annual Report of Health Department of Cincinnati, Ohio, 1879. 1 vol.  
 Annual Report Board of Health of Hamilton, Ohio, 1878 and 1879. 1 vol.  
 Report Board of Health, Newburg, N. Y. 1 vol.  
 Annual Report of Board of Health of Toledo, Ohio. 1 vol.  
 Third Annual Report of State Board of Health, Wisconsin. 1 vol.  
 Seventh Registration Report of the State of Michigan. 1 vol.  
 Proceedings of the Sanitary Council of the Mississippi Valley.  
 Annual Report of Board of Health, of Births, Marriages, and Deaths, of Richmond, Va. 1878. 1 vol.  
 W. H. Powers' Report to Registrar-General on Outbreak of Diphtheria at the village of Bleadon, in Oxbridge Rural Sanitary District, England.  
 Dr. T. Thorne's Report to Medical Officer of Health on Sanitary Condition of District of Penistone, with reference to Infectious Diseases in the District.  
 Annual Report of City Registrar of Return of Deaths, together with Annual Report of Health Department and Hospital for the year ending December 31, 1878, for Charleston, S. C. 1 vol.  
 Proceedings of the National Conference of Colored Men of the United States held in the State Capital at Nashville, Tenn. 1 vol.  
 Annual Report of the City Registrar of Births, Marriages, and Deaths of Boston, Mass. 1 vol.  
 Report of Bureau of Statistics, Treasury Department, relative to the Imports, Exports, Immigration, and Navigation of the United States, three months ending March 31, 1879.  
 Dr. W. Ogle's Report to the Local Government Board, England, on an outbreak of Diphtheria in the Sanitary District of Barnstable.  
 North Carolina Board of Health Method of performing Post-Mortem Examinations.  
 Seventh Annual Report of the Board of Health of the city of Boston, 1879. 1 vol.  
 Report of Board of Health of the City and Port of Philadelphia, 1879. 1 vol.  
 Dr. Airy's Report to the Local Government Board, England, on an outbreak of Enteric Fever in Chichester.  
 Dr. Thorne Thorne's Report to the Local Government Board, England, on the Sanitary Condition of Wickford, in the Rural Sanitary District of Billericay, with special reference to a recent Prevalence of Diphtheria in the village.  
 Dr. Blaxall's Report to the Local Government Board, England, upon an Epidemic of Enteric Fever in the village of Selborne Hauts.  
 Sanitary Engineering. J. Bailey Denton. 1 vol. (purchased).  
 Treatise on Hygiene and Public Health. By A. H. Buck, M. D. 2 vols. (purchased).  
 Annuaire de La Mortalité au Tableaux Statistiques des causes De Deces for 1879. Ville de Bruxelles, Belgium. 1 vol.  
 Annual Report of the Board of Health of the City of Pittsburgh, Pa., 1878. 1 vol.  
 Eighteenth Annual Report of the Health Officer of Philadelphia, Pa.

# 310 REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA.

## ESTIMATES.

*Estimate of appropriations required to defray the expenses of conducting the sanitary service, to secure a full and correct record of vital statistics, and to prevent domestic animals from running at large in the District of Columbia during the fiscal year ending June 30, 1881.*

For salary of health officer .....	\$3,000
For six sanitary inspectors, at \$1,200 each .....	7,200
For two food-inspectors, at 1,200 each .....	2,400
For clerks .....	7,000
For salary of pound-master* .....	1,200
For messenger* .....	600
For contingent expenses, including books, stationery, fuel, rent, disinfectants, and miscellaneous items .....	4,000
Total .....	25,400

\*The increase of \$1,000 asked in these estimates over appropriation of last year is made by an addition of \$200 to the salary of pound-master, making it \$1,200, which amount, I think, should be given that officer, he having his duties largely increased by the recent extension in the area for the taking up and impounding of domestic animals. Six hundred dollars is for the payment of a messenger, that item being omitted last year, and \$200 additional is added to miscellaneous expenses for purchase of a new wagon for pound service.

## APPENDIX.

The following tables, showing the vital statistics of European states, are taken from the Report of the Registrar-General of England for 1878, and presented for general information of statisticians and others.

The facts therein contained will prove of general interest.

TABLE 1.

*Proportion of persons married, births, and deaths per 1,000 of the population in England and Wales, and in Denmark, Sweden, Austria, Hungary, and Transylvania, Prussia, German Empire, Belgium, The Netherlands, France, Spain, and Italy.*

[Tabulated from returns furnished by the authorities of the various states.]

## MARRIAGE-RATE.

Years.	England and Wales.	Denmark.	Sweden.	Austria.	Hungary.	Prussia.	German Empire.	Belgium.	The Netherlands.	France.	Spain.	Italy.
1853	17.9	18.5	14.4	16.8	.....	17.0	.....	13.5	15.5	15.5	.....	.....
1854	17.12	17.5	15.4	15.4	.....	15.6	.....	12.9	14.9	14.9	.....	.....
1855	16.12	17.1	15.0	14.6	.....	15.2	.....	12.9	14.5	15.7	.....	.....
1856	16.5	17.3	14.9	18.8	.....	16.3	.....	14.5	15.1	15.7	.....	.....
1857	16.5	18.0	15.5	17.6	.....	18.6	.....	16.3	15.8	16.3	.....	.....
1858	16.0	17.5	16.2	17.3	.....	18.9	.....	16.5	15.9	16.9	.....	.....
1859	17.0	16.9	16.6	14.8	.....	16.7	.....	15.8	16.3	16.4	.....	.....
1860	17.1	16.0	15.6	17.5	.....	16.8	.....	14.8	16.2	15.8	.....	.....
1861	16.3	14.9	14.5	17.1	.....	15.9	.....	14.1	16.1	16.3	16.5	.....
1862	16.1	14.7	14.1	18.0	.....	16.8	.....	14.1	15.6	16.2	16.0	.....
1863	16.8	15.0	14.5	17.3	.....	17.3	.....	14.6	16.5	16.0	15.3	16.3
1864	17.3	11.3	14.0	16.7	.....	17.2	.....	15.0	16.7	15.8	15.5	16.0
1865	17.5	17.8	14.1	16.0	.....	18.1	.....	15.1	16.9	15.7	15.7	18.0
1866	17.5	16.8	13.4	13.5	16.3	15.5	.....	15.1	16.7	16.0	15.9	11.2
1867	16.5	15.3	12.2	17.8	20.8	18.6	.....	15.6	16.7	15.7	14.2	13.4
1868	16.1	14.6	10.9	18.5	27.3	17.6	.....	14.6	15.3	15.7	13.3	14.3
1869	15.9	14.7	11.3	20.7	22.0	17.8	.....	14.8	15.5	16.5	16.2	15.9
1870	16.1	14.7	13.1	19.4	19.6	14.7	.....	13.9	15.8	12.1	12.5	14.6
1871	16.7	14.6	13.0	19.0	20.8	15.9	.....	14.7	15.9	14.4	.....	14.9
1872	17.5	15.0	13.9	18.4	21.5	20.6	20.6	15.5	16.4	19.5	.....	15.0
1873	17.6	16.2	14.6	18.5	22.6	20.3	20.0	15.5	17.0	17.7	.....	15.8
1874	17.1	16.4	14.5	17.9	21.4	19.4	19.1	15.1	16.6	16.6	.....	15.2
1875	16.8	16.9	14.0	16.9	21.9	18.0	18.2	14.5	16.6	16.4	.....	16.8
1876	16.7	17.0	14.1	16.3	.....	17.1	17.0	14.3	16.4	15.8	.....	16.2

## BIRTH-RATE.

1853	33.3	31.9	31.4	40.8	.....	37.1	.....	28.1	33.0	25.9	.....	.....
1854	34.1	32.9	33.5	38.4	.....	36.3	.....	28.8	32.6	25.5	.....	.....
1855	33.7	32.1	31.8	36.9	.....	34.5	.....	27.3	32.0	24.9	.....	.....
1856	34.5	32.6	31.5	39.6	.....	34.7	.....	29.6	32.6	26.3	.....	.....
1857	34.4	33.2	32.4	42.9	.....	38.6	.....	31.3	34.6	25.9	.....	.....
1858	33.7	33.4	34.8	42.2	.....	39.4	.....	31.4	32.3	26.7	.....	.....
1859	35.0	33.8	35.0	43.2	.....	39.8	.....	32.1	34.9	27.9	.....	.....
1860	34.4	32.7	34.8	40.6	.....	38.6	.....	30.6	31.7	26.2	.....	.....
1861	34.6	31.8	32.6	40.0	.....	37.5	.....	30.8	35.2	26.9	39.3	.....
1862	35.0	31.0	33.4	40.3	.....	37.0	.....	30.1	33.1	26.5	38.3	.....
1863	35.2	31.1	33.6	39.9	.....	39.3	.....	31.8	36.1	26.9	37.4	39.1
1864	35.4	30.3	33.6	40.4	.....	39.4	.....	31.5	35.5	26.6	38.5	37.8
1865	35.4	31.4	32.8	39.1	.....	39.1	.....	31.4	35.9	26.5	37.9	38.3
1866	35.2	32.2	33.1	44.2	42.1	39.2	.....	31.7	35.3	26.4	37.3	38.7
1867	35.4	30.5	30.8	34.7	38.8	36.9	.....	32.1	35.2	26.4	37.3	36.5
1868	35.8	31.2	27.5	39.3	42.4	36.8	.....	31.5	34.7	25.7	34.4	35.3
1869	34.8	29.5	28.2	40.2	42.6	37.7	.....	31.6	34.5	25.7	35.7	37.0
1870	35.2	30.5	28.3	40.5	41.7	38.1	.....	32.3	35.9	25.5	35.4	36.7
1871	35.0	30.2	30.4	39.9	43.0	33.8	.....	31.0	35.3	23.6	.....	37.0
1872	35.8	30.3	30.0	39.9	41.0	39.7	39.4	32.3	35.8	22.8	.....	37.8
1873	35.5	30.7	30.8	40.3	42.2	39.7	39.7	32.5	36.0	26.1	.....	36.3
1874	36.2	30.8	30.9	40.1	42.7	40.1	40.1	32.6	36.1	26.2	.....	34.9
1875	35.5	31.8	31.0	40.4	45.2	40.5	40.6	32.5	36.3	26.0	.....	37.7
1876	36.6	32.5	30.7	40.6	.....	40.5	40.8	33.2	36.8	26.3	.....	39.0

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Proportion of persons married, births, and deaths per 1,000 of the population, &amp;c.—Cont'd.

## DEATH-RATE.

Years.	England and Wales.	Denmark.	Sweden.	Austria.	Hungary.	Prussia.	German Empire.	Belgium.	The Netherlands.	France.	Spain.	Italy.
1853.....	22.9	24.3	23.7	35.0	.....	29.0	.....	22.1	24.5	22.0	.....	.....
1854.....	23.5	18.5	19.8	37.4	.....	27.6	.....	22.5	23.9	27.4	.....	.....
1855.....	22.6	20.1	21.5	46.0	.....	30.6	.....	24.5	28.1	25.9	.....	.....
1856.....	20.5	18.9	21.8	31.9	.....	26.2	.....	21.5	23.4	23.2	.....	.....
1857.....	21.8	21.9	27.6	29.6	.....	28.2	.....	22.6	27.3	23.7	.....	.....
1858.....	23.1	23.3	21.7	32.0	.....	27.6	.....	23.3	27.8	24.0	.....	.....
1859.....	23.4	20.4	20.1	30.7	.....	25.7	.....	23.9	31.2	26.9	.....	.....
1860.....	21.2	20.2	17.6	29.8	.....	23.7	.....	19.6	24.7	21.4	.....	.....
1861.....	21.6	18.4	18.5	31.4	.....	25.3	.....	22.2	25.2	23.2	.....	.....
1862.....	21.4	18.4	21.4	30.9	.....	24.5	.....	20.7	23.7	21.7	.....	26.8
1863.....	23.0	18.3	19.3	31.1	.....	26.0	.....	22.1	23.2	22.5	.....	30.8
1864.....	23.7	23.3	20.2	30.2	.....	26.0	.....	23.5	25.1	22.7	.....	30.6
1865.....	23.2	23.2	19.4	31.0	.....	27.2	.....	24.5	25.8	24.3	.....	29.8
1866.....	23.4	20.9	20.0	33.3	38.9	34.0	.....	30.3	28.7	23.2	.....	28.0
1867.....	21.7	20.0	19.6	28.1	33.5	25.6	.....	21.6	23.6	22.1	.....	29.1
1868.....	21.9	19.3	21.0	29.3	33.8	27.3	.....	21.7	24.8	24.1	.....	32.6
1869.....	22.3	19.1	22.3	28.9	32.0	25.9	.....	21.8	23.0	23.5	.....	32.6
1870.....	22.9	19.1	19.8	29.2	32.6	25.9	.....	23.3	25.7	28.3	.....	30.1
1871.....	22.6	19.5	17.2	30.0	39.0	28.4	.....	28.5	29.4	34.8	.....	30.0
1872.....	21.3	18.3	16.3	32.4	42.3	29.3	29.0	23.2	25.7	22.0	.....	30.7
1873.....	21.1	18.6	17.2	38.5	65.1	28.0	28.2	21.5	24.9	23.3	.....	30.0
1874.....	22.3	19.9	20.3	31.3	42.6	25.9	26.7	20.5	22.6	21.4	.....	30.3
1875.....	22.8	21.0	20.2	29.7	37.2	26.4	27.6	22.7	25.4	23.1	.....	30.7
1876.....	21.0	20.0	19.5	29.4	.....	25.4	26.3	21.9	23.3	22.7	.....	28.7

NOTE.—Cholera is given as being chiefly the cause of the high rate of mortality in Denmark in 1853; in Sweden in 1853, 1857, and 1866; in Austria in 1866 and 1873; in Hungary in 1866, 1873, and 1874; in Prussia in 1866; in Belgium in 1866; in the Netherlands in 1859 and 1866, where also small-pox prevailed in 1871; and in France in 1865 and 1866. War contributed to the same end in Denmark in 1850 and 1864; in Austria in 1866; in Prussia in 1866, 1870, and 1871; and in France in 1870 and 1871.

TABLE 2.

ENGLAND AND WALES.—Population; number, and proportion per 1,000, of persons married, births, and deaths in each of the years 1853 to 1876.

Years.	Numbers.					Proportion per 1,000 of the population.		
	Estimated population in the middle of each year.	Marriages.	Persons married.	Births, exclusive of still-born.	Deaths, exclusive of still-born.	Persons married.	Births.	Deaths.
1853.....	18,404,368	164,520	329,040	612,391	421,097	17.9	33.3	22.9
1854.....	18,616,310	159,727	319,454	634,405	437,905	17.2	34.1	23.5
1855.....	18,829,000	152,113	304,226	635,043	425,703	16.2	33.7	22.6
1856.....	20,119,412	159,337	318,674	657,453	390,506	16.7	34.5	20.5
1857.....	19,256,516	159,097	318,194	663,071	419,815	16.5	34.4	21.8
1858.....	19,471,291	156,070	312,140	655,481	449,656	16.0	33.7	23.1
1859.....	19,686,701	167,723	335,446	689,881	440,781	17.0	35.0	22.4
1860.....	19,902,713	170,156	340,312	684,048	422,721	17.1	34.4	21.2
1861.....	20,119,314	163,706	327,412	606,466	435,114	16.3	34.6	21.6
1862.....	20,371,013	164,030	328,060	712,684	436,566	16.1	35.0	21.4
1863.....	20,625,855	173,510	347,020	727,417	473,837	16.8	35.3	23.0
1864.....	20,883,889	180,387	360,774	740,275	495,531	17.3	35.4	23.7
1865.....	21,145,151	185,474	370,948	748,069	490,909	17.5	35.4	23.2
1866.....	21,409,684	187,776	375,552	753,870	500,689	17.5	35.2	23.4
1867.....	21,677,525	179,154	358,308	768,349	471,073	16.5	35.4	21.7
1868.....	21,948,713	176,962	353,924	786,858	480,622	16.1	35.8	21.9
1869.....	22,223,299	176,970	353,940	773,381	494,828	15.9	34.8	22.3



TABLE 2—*England and Wales, &c.*—Continued.

Years.	Number.					Proportion per 1,000 of the population.		
	Estimated population in the middle of each year.	Marriages.	Persons married.	Births, exclusive of still-born.	Deaths, exclusive of still-born.	Persons married.	Births.	Deaths.
1870.....	22,501,316	181,655	363,310	792,787	515,329	16.1	35.2	22.9
1871.....	22,782,812	190,112	380,224	797,428	514,879	16.7	35.0	22.6
1872.....	23,067,835	201,267	402,534	825,967	492,265	17.5	35.8	21.3
1873.....	23,356,414	205,615	411,230	829,778	492,520	17.6	35.5	21.1
1874.....	23,648,609	202,010	404,020	854,956	526,632	17.1	36.2	22.3
1875.....	23,944,459	201,212	402,424	850,667	546,453	16.8	35.5	22.8
1876.....	24,244,010	201,874	403,748	887,968	510,315	16.7	36.6	21.0

\* Census years.

TABLE 3.

DENMARK (THE KINGDOM PROPERLY SO CALLED).—*Population; number, and proportion per 1,000, of persons married, births, and deaths in each of the years 1850 to 1876.*

[Supplied by the Statistical Bureau of Denmark.]

Years.	Numbers.					Proportions per 1,000 of the population.		
	Estimated population Feb. 1.	Marriages.	Persons married.	Births, exclusive of still-born.	Deaths, exclusive of still-born.	Persons married.	Births.	Deaths.
1850*.....	1,407,747	10,824	21,648	44,768	†27,231	15.4	31.8	†19.3
1851.....	1,425,700	14,205	28,410	43,338	26,570	19.9	30.4	18.6
1852.....	1,443,900	14,153	28,306	48,390	28,550	19.6	33.5	19.8
1853.....	1,462,300	13,521	27,042	46,614	†35,592	18.5	31.9	†24.3
1854.....	1,481,000	12,994	25,988	48,725	27,439	17.5	32.9	18.5
1855*.....	1,499,850	12,821	25,642	48,160	30,157	17.1	32.1	20.1
1856.....	1,519,500	13,175	26,350	49,553	28,662	17.3	32.6	18.9
1857.....	1,539,300	13,847	27,694	51,054	33,768	18.0	33.2	21.9
1858.....	1,559,500	13,626	27,252	52,115	36,388	17.5	33.4	23.3
1859.....	1,579,900	13,334	26,668	53,361	32,268	16.9	33.8	20.4
1860*.....	1,608,362	12,849	25,698	52,536	32,524	16.0	32.7	20.2
1861.....	1,625,200	12,097	24,194	51,616	29,947	14.9	31.8	18.4
1862.....	1,642,200	12,044	24,088	50,942	30,200	14.7	31.0	18.4
1863.....	1,659,400	12,456	24,912	51,701	30,333	15.0	31.1	18.3
1864.....	1,676,700	9,466	18,932	50,797	†39,100	11.3	30.3	†23.3
1865*.....	1,694,300	15,056	30,112	53,218	39,266	17.8	31.4	23.2
1866.....	1,712,000	14,354	28,708	55,141	35,707	16.8	32.2	20.9
1867.....	1,729,900	13,225	26,450	52,700	34,553	15.3	30.5	20.0
1868.....	1,748,000	12,769	25,538	54,490	33,816	14.6	31.2	19.3
1869.....	1,766,300	12,971	25,942	52,109	33,781	14.7	29.5	19.1
1870*.....	1,784,741	13,134	26,268	54,420	34,091	14.7	30.5	19.1
1871.....	1,803,400	13,207	26,414	54,396	35,075	14.6	30.2	19.5
1872.....	1,822,300	13,627	27,254	55,221	33,433	15.0	30.3	18.3
1873.....	1,841,300	14,903	29,806	56,571	34,250	16.2	30.7	18.6
1874.....	1,860,600	15,260	30,520	57,278	37,046	16.4	30.8	19.9
1875.....	1,880,100	15,915	31,830	59,749	39,423	16.9	31.8	21.0
1876.....	1,899,700	16,183	32,366	61,790	37,956	17.0	32.5	20.0

NOTE.—An addition of territory containing a population of about 8,000 was made in 1864, and the facts relating to these are shown in this table from 1860. Previous to January 1, 1869, children who died within twenty-four hours after birth were counted as still-born.

\* Census years.

† Cholera was epidemic in the year 1853, and war raged in the years 1850 and 1864.

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TABLE 4.

SWEDEN.—Population; number, and proportion per 1,000, of persons married, births, and deaths in each of the years 1850 to 1876.

[Supplied by Dr. Berg, chief of the statistical department of Sweden.]

Years.	Population 31st December from parochial registers of population.	Numbers.					Proportions per 1,000 of the population.		
		Marriages.	Persons married.	Births, exclusive of still-born.	Deaths, exclusive of still-born.		Persons married.	Births.	Deaths.
1850*	3,482,541	26,267	52,554	110,299	68,514		15.2	31.9	19.8
1851	3,517,739	25,750	51,500	111,065	72,506		14.7	31.7	20.8
1852	3,540,421	24,150	48,300	108,305	80,090		13.7	30.7	22.7
1853	3,562,543	25,596	51,192	111,407	84,047		14.4	31.4	23.7
1854	3,605,321	27,585	55,170	120,107	70,846		15.4	33.5	19.8
1855*	3,641,011	27,253	54,506	115,072	77,734		15.0	31.8	21.5
1856	3,672,988	27,221	54,442	115,082	79,618		14.9	31.5	21.8
1857	3,687,601	28,531	57,062	119,349	101,491		15.5	32.4	27.6
1858	3,734,240	30,092	60,184	129,039	80,498		16.2	34.8	21.7
1859	3,787,735	31,125	62,250	131,605	75,720		16.6	35.0	20.1
1860*	3,859,728	29,839	59,678	133,162	67,592		15.6	34.8	17.6
1861	3,917,339	28,272	56,544	126,634	71,829		14.5	32.6	18.5
1862	3,965,899	27,825	55,650	131,584	84,350		14.1	33.4	21.4
1863	4,022,564	29,013	58,026	134,279	77,227		14.5	33.6	19.3
1864	4,070,061	28,248	56,496	136,004	81,937		14.0	33.6	20.2
1865	4,114,141	28,944	57,888	134,281	79,216		14.1	32.8	19.4
1866	4,160,677	27,797	55,594	136,989	82,666		13.4	33.1	20.0
1867	4,195,681	25,440	50,880	128,832	82,672		12.2	30.8	19.6
1868	4,173,080	22,833	45,660	114,955	87,867		10.9	27.5	21.0
1869	4,158,757	23,503	47,006	117,677	92,775		11.3	28.2	22.3
1870*	4,168,595	25,072	50,144	119,838	82,449		13.1	28.3	19.8
1871	4,204,177	27,187	54,374	127,333	72,046		13.0	30.4	17.2
1872	4,250,412	29,470	58,940	126,983	68,802		13.9	30.0	16.3
1873	4,207,972	31,257	62,514	131,643	73,525		14.6	30.8	17.2
1874	4,341,559	31,422	62,844	138,249	187,760		14.5	30.9	20.3
1875	4,383,291	30,762	61,524	135,958	88,439		14.0	31.0	20.2
1876	4,429,713	31,184	62,368	135,890	86,334		14.1	30.7	19.5

\* The populations of these years were enumerated at the respective censuses. Dr. Berg attributes the decrease observable in the population in the years 1868 and 1869 to failure of crops and consequent emigration.

† Cholera was epidemic in the years 1853, 1857, and 1866. In 1874 small-pox caused 4,063 deaths (the highest number in any year since 1801), scarlet fever 2,418 deaths, and typhus and typhoid fever 2,149 deaths.

TABLE 5.

AUSTRIA.—Population; number, and proportion per 1,000, of persons married, births, and deaths in each of the years 1853 to 1876.

[Furnished by Dr. A. Ficker, the chief of the statistical department of Austria.]

Years.	Estimated population in the middle of each year.	Numbers.				Proportions per 1,000 of the population.		
		Marriages.	Persons married.	Births.	Deaths.	Married persons.	Births.	Deaths.
1853	31,328,874	263,627	527,254	1,279,226	1,096,119	16.8	40.8	35.0
1854	31,493,583	241,799	483,598	1,208,853	1,177,888	15.4	38.4	37.4
1855	31,200,576	228,515	457,030	1,151,039	1,435,949	14.6	36.9	46.0
1856	31,425,385	295,970	591,940	1,245,339	1,002,068	18.8	39.6	31.9
1857*	32,053,235	281,643	563,286	1,373,988	947,817	17.6	42.9	29.6
1858	32,361,905	280,558	561,116	1,364,905	1,036,148	17.3	42.2	32.0
1859	32,750,697	242,371	484,742	1,413,983	1,004,295	14.8	43.2	30.7

TABLE 5.—*Austria, &c.*—Continued.

Years.	Number.					Proportions per 1,000 of the population.		
	Estimated population in the middle of each year.	Marriages.	Persons married.	Births.	Deaths.	Married persons.	Births.	Deaths.
1860.....	33,108,529	289,119	578,238	1,342,992	986,928	17.5	40.6	29.8
1861.....	33,399,945	286,244	572,488	1,334,727	1,048,016	17.1	40.0	36.4
1862.....	33,713,823	304,188	608,376	1,358,116	1,043,403	18.0	40.3	30.9
1863.....	23,078,057	199,833	399,666	920,439	633,016	17.3	39.9	31.1
1864.....	23,317,544	194,837	389,674	942,826	703,339	16.7	40.4	30.2
1865.....	20,876,643	167,004	334,008	816,753	646,980	16.0	39.1	31.0
1866.....	20,835,008	141,072	282,144	817,346	†446,991	13.5	44.2	†33.1
1867.....	20,986,536	187,079	374,158	729,037	590,352	17.8	34.7	28.3
1868.....	21,185,021	196,274	392,548	832,684	621,588	18.5	39.3	29.3
1869*.....	20,217,531	208,787	417,574	812,474	583,995	20.7	40.2	28.9
1870.....	20,385,498	197,497	394,994	825,017	595,146	19.4	40.5	29.2
1871.....	20,535,370	194,591	389,182	820,869	616,729	19.0	39.9	30.0
1872.....	20,727,164	191,277	382,554	826,034	671,303	18.4	39.9	32.4
1873.....	21,071,998	194,815	389,630	848,206	†111,150	18.5	40.3	†38.5
1874.....	21,169,341	189,017	378,034	849,678	662,929	17.9	40.1	31.3
1875.....	21,366,261	180,349	360,698	862,798	633,967	16.9	40.4	29.7
1876.....	21,565,435	176,148	352,296	874,623	634,363	16.3	40.6	29.4

Note.—The returns for Austria include Hungary, Croatia, Slavonia, and Transylvania, from 1853 to 1862, inclusive; since 1862 the returns exclude those portions of the empire. Until 1864 the States of Italy were included; since 1864, however, they are excluded. The facts for Hungary and Transylvania for years subsequent to 1865 appear in table following.

\* Census years.

† Dr. Ficker attributes the excessive mortality in the year 1866 to cholera and the war.

‡ Cholera caused the deaths of 107,007 persons in the year 1873.

TABLE 6.

HUNGARY AND TRANSYLVANIA.—*Population; number, and proportion per 1,000, of persons married, births, and deaths in each of the years 1866 to 1875.*

[Furnished by the Hungarian statistical department at Buda-Pesth.]

Years.	Numbers.					Proportions per 1,000 of the population.		
	Estimated population in the middle of each year.	Marriages.	Persons married.	Births.	Deaths.	Persons married.	Births.	Deaths.
1866.....	12,956,546	105,670	211,340	546,110	1504,043	16.3	42.1	†38.9
1867.....	13,026,346	135,601	271,202	506,234	436,434	20.8	38.8	33.5
1868.....	13,140,388	179,637	359,274	557,811	443,799	27.3	42.4	33.8
1869*.....	13,282,405	146,272	292,544	506,123	424,106	22.0	42.6	32.0
1870.....	13,685,852	133,999	267,998	570,692	446,085	19.6	41.7	32.6
1871.....	13,741,650	142,853	285,706	591,148	535,350	20.8	43.0	39.0
1872.....	13,724,567	147,555	295,110	563,362	580,448	21.5	41.0	42.3
1873.....	13,417,304	153,068	306,136	566,792	1874,055	22.6	42.2	†65.1
1874.....	13,418,020	143,718	287,436	572,444	1571,728	21.4	42.7	†42.6
1875.....	13,525,945	147,027	294,054	606,956	499,031	21.9	45.2	37.2

NOTE.—The above figures do not include the facts for Croatia or Slavonia.

\* The population enumerated at the census in 1869 was 13,685,852.

† Cholera.

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TABLE 7.

PRUSSIA.—Population; number, and proportion per 1,000, of persons married, births, and deaths in each of the years 1853 to 1876.

[Furnished by Dr. Engel, director of the statistical department of Prussia.]

Years.	Numbers.					Proportions per 1,000 of the population.		
	Estimated population in the middle of each year.	Marriages.	Persons married.	Births, exclusive of still-born.	Deaths, exclusive of still-born.	Persons married.	Births.	Deaths.
1853.....	17,065,143	145,345	290,690	633,018	495,092	17.0	37.1	29.0
1854.....	17,183,544	134,261	268,522	622,917	475,005	15.6	36.3	27.6
1855*.....	17,202,831	131,911	263,822	593,511	526,154	15.2	34.5	30.6
1856.....	17,328,539	141,267	282,534	601,005	453,298	16.3	34.7	26.2
1857.....	17,479,512	162,475	324,950	674,784	493,173	18.6	38.6	28.2
1858*.....	17,739,913	167,387	334,774	690,354	488,912	18.9	39.4	27.6
1859.....	17,983,484	130,569	301,138	715,635	462,360	16.7	39.8	25.7
1860.....	18,105,757	151,847	303,694	699,403	429,968	16.8	38.6	23.7
1861*.....	18,491,220	146,992	293,984	692,989	467,612	15.9	37.5	25.3
1862.....	18,711,806	157,118	314,236	692,395	457,739	16.8	37.0	24.5
1863.....	18,950,278	163,704	327,408	745,226	492,068	17.3	39.3	26.0
1864*.....	19,255,139	165,590	331,180	758,983	503,279	17.2	39.4	26.0
1865.....	19,465,696	176,236	352,472	761,298	530,137	18.1	39.1	27.2
1866.....	19,544,020	151,759	303,518	765,342	564,903	15.5	39.2	23.0
1867*.....	23,971,337	222,466	444,932	884,471	614,852	14.6	36.9	25.6
1868.....	24,148,516	212,958	425,916	887,810	658,728	17.6	36.8	27.3
1869.....	24,380,505	216,914	433,828	919,075	632,042	17.8	37.7	25.9
1870.....	24,635,893	181,539	363,078	938,489	665,942	14.7	38.1	25.9
1871*.....	24,643,623	195,974	391,948	832,130	708,469	15.9	32.8	28.4
1872.....	24,727,067	255,421	510,842	982,525	724,780	20.6	39.7	29.3
1873.....	24,901,789	252,872	505,744	987,392	698,366	20.3	39.7	28.0
1874.....	25,185,522	244,773	489,546	1,011,137	651,094	19.4	40.1	25.9
1875*.....	25,693,634	230,860	461,720	1,039,753	678,657	18.0	40.5	26.4
1876.....	25,971,962	221,712	443,424	1,053,070	659,537	17.1	40.5	25.4

NOTE.—The returns for Prussia include Schleswig-Holstein, Hanover, Hesse, and Nassau, in and after the year 1867. The deaths for 1866, 1870, and 1871 include the military that fell in the wars.

\* Census years.

† Cholera prevailed in the year 1866.

TABLE 8.

GERMAN EMPIRE.—Population; number, and proportion per 1,000, of persons married, births, and deaths in each of the years 1872 to 1876.

[Furnished by the statistical department of the German Empire.]

Years.	Numbers.					Proportions per 1,000 of the population.		
	Estimated population in the middle of each year.	Marriages.	Persons married.	Births, exclusive of still-born.	Deaths, exclusive of still-born.	Persons married.	Births.	Deaths.
1872.....	41,228,207	423,900	847,800	1,626,037	1,194,732	20.6	39.4	29.0
1873.....	41,561,304	416,049	832,098	1,647,967	1,173,955	20.0	39.7	28.2
1874.....	41,999,349	400,282	800,564	1,682,737	1,122,158	19.1	40.1	26.7
1875*.....	42,515,472	386,746	773,492	1,724,412	1,172,393	18.2	40.6	27.6
1876.....	43,072,342	366,912	733,824	1,757,701	1,133,627	17.0	40.8	26.3

\* Census year.

TABLE 9.

BELGIUM.—*Population; number, and proportion per 1,000, of persons married, births, and deaths in each of the years 1853 to 1876.*

Years.	Numbers.					Proportion per 1,000 of the population.		
	Estimated population Decem-ber 31.	Marriages.	Persons married.	Births, exclu-sive of still-born.	Deaths, exclu-sive of still-born.	Persons married.	Births.	Deaths.
1853 .....	4,548,567	30,636	61,272	127,728	100,333	13.5	28.1	22.1
1854 .....	4,584,932	29,485	58,970	131,837	103,266	12.9	28.8	22.5
1855 .....	4,667,066	29,815	59,630	125,955	112,716	12.9	27.3	24.5
1856* .....	4,529,461	32,926	65,852	134,187	97,395	14.5	29.6	21.5
1857 .....	4,577,236	37,292	74,584	143,291	103,458	16.3	31.3	22.6
1858 .....	4,623,197	38,237	76,474	145,074	107,910	16.5	31.4	23.2
1859 .....	4,671,187	36,941	73,882	149,812	111,650	15.8	32.1	23.0
1860 .....	4,731,957	35,112	70,224	144,068	92,871	14.8	30.6	19.6
1861 .....	4,782,256	33,802	67,604	147,253	106,381	14.1	30.8	22.2
1862 .....	4,836,566	34,146	68,292	145,608	100,124	14.1	30.1	20.7
1863 .....	4,893,021	35,813	71,626	155,564	107,959	14.6	31.8	22.1
1864 .....	4,949,570	36,959	73,918	155,872	115,048	15.0	31.5	23.5
1865 .....	4,984,351	37,671	75,342	156,323	122,341	15.1	31.4	24.5
1866* .....	4,991,613	37,783	75,566	158,010	115,116	15.1	31.7	30.3
1867 .....	4,897,794	38,244	76,488	157,149	105,576	15.6	32.1	21.6
1868 .....	4,961,644	36,271	72,542	156,134	107,556	14.6	31.5	21.7
1869 .....	5,021,336	37,134	74,268	158,687	109,607	14.8	31.6	21.8
1870 .....	5,087,826	35,263	70,526	164,572	118,359	13.9	32.3	23.3
1871 .....	5,113,680	37,538	75,076	158,760	145,746	14.7	31.0	28.5
1872 .....	5,175,037	40,084	80,168	167,377	120,129	15.5	32.3	23.2
1873 .....	5,253,821	40,598	81,196	170,708	112,873	15.5	32.5	21.5
1874 .....	5,336,634	40,328	80,656	173,978	109,595	15.1	32.6	20.5
1875 .....	5,403,066	39,050	78,100	175,552	122,480	14.5	32.5	22.7
1876* .....	5,336,185	38,228	76,456	176,915	116,787	14.3	33.2	21.0

\* Census years.

† Cholera prevailed in the year 1866.

TABLE 10.

THE NETHERLANDS.—*Population; number, and proportion per 1,000, of persons married, births, and deaths in each of the years 1853 to 1876.*

[Supplied by Dr. de Bosch Kemper, chief of the statistical department of The Netherlands.]

Years.	Numbers.					Proportion per 1,000 of the population		
	Estimated population Decem-ber 31.	Marriages.	Persons married.	Births exclusive of still-born.	Deaths exclusive of still-born.	Persons married.	Births.	Deaths.
1853 .....	3,163,230	24,487	48,974	104,297	77,415	15.5	33.0	24.5
1854 .....	3,198,349	23,855	47,710	104,244	76,475	14.9	32.6	23.9
1855 .....	3,215,780	23,367	46,734	102,815	90,202	14.5	32.0	28.1
1856 .....	3,251,066	24,509	49,018	106,008	76,145	15.1	32.6	23.4
1857 .....	3,282,210	25,950	51,900	113,426	87,625	15.8	34.6	27.6
1858 .....	3,303,376	26,342	52,684	106,846	91,925	15.9	32.3	27.8
1859* .....	3,308,969	27,007	54,014	115,569	103,067	16.3	34.9	31.2
1860 .....	3,336,429	27,108	54,216	105,847	82,545	16.2	31.7	24.7
1861 .....	3,373,033	27,172	54,344	118,681	85,133	16.1	35.2	25.2
1862 .....	3,410,350	26,541	53,082	112,768	80,822	15.6	33.1	23.7
1863 .....	3,453,425	28,419	56,838	124,758	80,064	16.5	36.1	23.2
1864 .....	3,491,864	29,154	58,308	123,795	87,766	16.7	35.5	25.1

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TABLE 10.—*The Netherlands*—Continued.

Years.	Numbers.					Proportion per 1,000 of the population.		
	Estimated population Decem-ber 31.	Marriages.	Persons married.	Births, exclusive of still-born.	Deaths, exclusive of still-born.	Persons married.	Births.	Deaths.
1865.....	3,529,107	29,806	59,612	126,794	91,074	16.9	35.9	25.8
1866.....	3,552,575	29,629	59,240	125,253	101,854	16.7	35.3	28.7
1867.....	3,592,415	29,935	59,870	126,504	84,767	16.7	35.2	23.6
1868.....	3,628,468	27,680	55,360	126,059	89,944	15.3	34.7	24.8
1869 <sup>*</sup> .....	3,583,970	27,796	55,592	123,789	82,553	15.5	34.5	23.0
1870.....	3,618,323	28,632	57,264	129,997	93,066	15.8	35.9	25.7
1871.....	3,637,274	28,991	57,982	128,305	106,978	15.9	35.3	29.4
1872.....	3,674,660	30,189	60,378	131,664	94,594	16.4	35.8	25.7
1873.....	3,716,002	31,671	63,342	133,796	89,287	17.0	36.0	24.0
1874.....	3,767,263	31,353	62,706	136,072	85,069	16.6	36.1	22.6
1875.....	3,809,527	31,553	63,106	138,469	96,834	16.6	36.3	25.4
1876.....	3,865,456	31,699	63,398	142,209	90,186	16.4	36.8	23.3

<sup>\*</sup> Census years.

† Cholera was epidemic in the years 1859 and 1866, and was fatal to 3,878 and 19,686 persons respectively; small-pox caused 15,787 deaths in the year 1871.

TABLE 11.

FRANCE.—*Population; number, and proportion per 1,000, of persons married, births, and deaths in each of the years 1853 to 1876.*

[Supplied by M. Deloche, director of the statistical bureau of France.]

Years.	Numbers.					Proportion per 1,000 of the population.		
	Estimated population in the middle of each year.	Marriages.	Persons married.	Births, exclusive of still-born.	Deaths, exclusive of still-born.	Persons married.	Births.	Deaths.
1853.....	36,108,206	280,609	561,218	936,967	795,607	15.5	25.9	22.0
1854.....	36,249,566	270,696	541,392	923,461	992,779	14.9	25.5	27.4
1855.....	36,180,248	283,335	566,670	902,336	937,942	15.7	24.9	25.9
1856 <sup>*</sup> .....	36,139,364	284,401	568,802	952,116	837,082	15.7	26.3	23.2
1857.....	36,268,793	295,510	591,020	940,709	858,785	16.3	25.9	23.7
1858.....	36,350,717	307,056	614,112	969,343	874,186	16.9	26.7	24.0
1859.....	36,445,874	298,417	596,834	1,017,896	979,333	16.4	27.9	26.9
1860.....	36,484,437	288,936	577,872	956,875	781,635	15.8	26.2	21.4
1861 <sup>*</sup> .....	37,386,313	305,203	610,406	1,005,078	866,597	16.3	26.9	23.2
1862.....	37,517,752	303,514	607,028	995,167	812,978	16.2	26.5	21.7
1863.....	37,699,941	301,376	602,752	1,012,794	846,917	16.0	26.9	22.5
1864.....	37,865,818	299,579	599,158	1,005,880	860,330	15.8	26.6	22.7
1865.....	38,011,368	299,242	598,484	1,005,753	1,021,887	15.7	26.5	24.3
1866 <sup>*</sup> .....	38,067,064	303,634	607,268	1,006,258	1,084,573	16.0	26.4	23.2
1867.....	38,188,749	300,333	600,666	1,007,755	866,887	15.7	26.4	22.7
1868.....	38,329,617	301,225	602,450	984,140	922,038	15.7	25.7	24.1
1869.....	38,855,178	303,482	606,964	948,526	864,320	16.5	25.7	23.5
1870.....	36,985,212	223,705	447,410	943,515	1,046,909	12.1	25.5	128.3
1871.....	36,544,067	262,476	524,952	826,121	1,271,010	14.4	22.6	134.8
1872 <sup>*</sup> .....	36,102,921	352,754	705,508	966,000	793,064	19.5	26.8	22.0
1873.....	36,281,335	321,238	642,476	946,354	844,588	17.7	26.1	23.3
1874.....	36,459,749	303,113	606,226	954,652	781,709	16.6	26.2	21.4
1875.....	36,638,163	300,427	600,854	950,975	845,062	16.4	26.0	23.1
1876.....	36,816,581	291,366	582,732	966,682	834,474	15.8	26.3	22.7

<sup>\*</sup> Census years.

† Cholera was prevalent in 1865-'66, and was raged in 1870 and 1871.

NOTE.—The population in the four years 1862-'65, and in the years 1867-'69, was estimated by means of the average annual rate of increase observed between the two enumerations of 1861 and 1866. The returns since the year 1860 include the three newly annexed departments. The deaths of Frenchmen and civil or military, are registered in the books of the commune in which they were last domiciled.

TABLE 12.

SPAIN.—Population; number, and proportion per 1,000, of persons married, births, and deaths in each of the years 1861 to 1870.

Years.	Number.					Proportion per 1,000 of the population.		
	Estimated population.	Marriages.	Persons married.	Births.	Deaths.	Persons married.	Births.	Deaths.
1861.....	15,879,868	130,731	261,462	624,096	417,764	16.5	39.3	26.3
1862.....	16,065,124	128,696	257,392	615,919	430,603	16.0	38.3	26.8
1863.....	16,210,263	124,176	248,352	606,800	461,661	15.3	37.4	28.5
1864.....	16,340,323	126,303	252,606	629,546	499,486	15.5	38.5	30.6
1865.....	16,423,793	128,917	257,834	622,050	538,580	15.7	37.9	32.8
1866.....	16,579,090	131,981	263,962	618,981	463,684	15.9	37.3	28.0
1867.....	16,716,151	118,409	236,818	624,212	487,151	14.2	37.3	29.1
1868.....	16,853,212	111,684	223,368	579,464	548,690	13.3	34.4	32.6
1869.....	16,883,986	137,120	274,240	602,287	550,660	16.2	35.7	32.6
1870*.....	16,935,613	105,543	211,086	599,786	509,669	12.5	35.4	30.1

\* No figures have been received for years subsequent to 1870, in consequence of the disturbed condition of the country.

NOTE.—The population enumerated at the census of 1860 was 15,673,536. The estimated population for the years subsequent to 1861 has been deduced from the excess of births over deaths in each year. The decline of registered marriages in 1870 is believed to be due to the introduction of civil registration, which occurred during that year.

TABLE 13.

ITALY (INCLUSIVE OF VENETIA).—Population; number, and proportion per 1,000, of persons married, births, and deaths in each of the years 1863 to 1876.

[Furnished by Prof. L. Bodio, director of general Italian statistics.]

Years.	Number.					Proportion per 1,000 of the population.		
	Estimated population Dec. 31.	Marriages.	Persons married.	Births, exclusive of still-born.	Deaths.	Persons married.	Births.	Deaths.
1863.....	24,649,031	201,225	402,450	964,137	760,164	16.3	39.1	30.8
1864.....	24,850,690	198,759	397,518	938,795	737,136	16.0	37.8	29.7
1865.....	25,065,239	226,458	452,916	961,234	746,685	18.0	38.3	29.8
1866.....	25,312,249	142,024	128,048	980,200	733,190	11.2	38.7	29.0
1867.....	25,372,780	170,456	340,912	927,396	866,865	13.4	36.5	34.2
1868.....	25,495,972	182,743	365,486	900,416	777,224	14.3	35.3	30.5
1869.....	25,734,274	205,287	410,574	952,134	713,832	15.9	37.0	27.7
1870.....	25,912,600	188,986	377,972	951,495	773,169	14.6	36.7	29.8
1871*.....	25,964,450	192,839	385,678	960,020	778,798	14.9	37.0	30.0
1872.....	26,994,338	202,361	404,722	1,020,682	827,498	15.0	37.8	30.7
1873.....	27,165,553	214,906	429,812	985,188	813,973	15.8	36.3	30.0
1874.....	27,289,958	207,997	415,994	951,658	827,253	15.2	34.9	30.3
1875.....	27,482,174	230,486	460,972	1,035,377	843,161	16.8	37.7	30.7
1876.....	27,769,475	225,453	450,906	1,083,721	796,420	16.2	39.0	28.7

\* Census year.

† The decrease of marriages in 1866 may be attributed to the law, which then came into operation introducing civil marriage, and rendering the church marriages of no legal effect. There had been marked increase in 1865, resulting from a wish to evade the law about to come into operation. After the 1st of January, 1866, the marriages solemnized only in the churches, not being legally recognized, escaped registration; their number, which was very great in 1866 and the following year, is happily decreasing.

NOTE.—The population was estimated in the following manner: To the population of Italy, exclusive of Venetia, according to the census on 31st of December, 1861, was added to the population of Venetia according to the Austrian census in 1858, and also the excess of births over deaths in each year. No correction was made either for immigration or emigration. The population for 1871 (except for Rome, where the census was not taken until 1872) is that enumerated at the census on the last day of December 1871. The facts for Rome were first included with these for the Kingdom of Italy in 1872.

All of which is respectfully submitted.

SMITH TOWNSHEND, M. D.,  
Health Officer, District of Columbia.

The COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

## L.—REPORT OF THE MAJOR OF POLICE.

DEPARTMENT OF METROPOLITAN POLICE,  
OFFICE OF MAJOR AND SUPERINTENDENT,  
*Washington, D. C., October 8, 1879.*

GENTLEMEN: In compliance with instructions of 9th September, 1879, "to make on or before the 10th proximo a detailed statement of the transactions of your (this) department since your (my) last report, up to the 1st of July last, with any recommendations you (I) may think proper to make with the object of increasing the efficiency of the same; also to forward an estimate of the amount required for its support for the fiscal year ending 30th June, 1881," I have the honor to call attention to the accompanying tables for a condensed statement of the operations of the department for the year ending June 30, 1879, and to make the following recommendations, premising that for general efficiency and discipline it is believed that the department will favorably compare with any similar organization in the country.

## INCREASE OF THE FORCE.

The force as at present authorized is entirely too small for the duties expected of it. Since 1866, when the present number of patrolmen (200) was authorized by Congress, the population of the District has, within limits, doubled; millions have been added to the value of public and private property; streets and avenues have been opened and lengthened, and what in 1866 was but a barren waste is now covered with buildings of great value. With this increase in value and extent of the city the duties of the force have more than kept pace; some of the beats in the outer portions of the city are fifteen miles and upwards in length.

Again, while the number of privates or patrolmen on the force is numerically 200, that is by no means the number available for street or patrol duty. Large details are required for public receptions of government officials, foreign representatives, &c., in attendance on the courts as witnesses, complainants, and in charge of prisoners; permanent details for post duty at police court, police headquarters, Baltimore and Ohio and Baltimore and Potomac Railroad depots, steamboat wharves, health office, Executive Mansion, District government buildings, &c. To these must be added the absences from sickness and leaves of absence. The average residue for patrol duty will not exceed 125 men. An increase of 200 patrolmen is respectfully recommended.

## STATION-HOUSES.

The buildings rented by the District for station-house purposes are not adapted to the service, being defective in sewerage and ventilation, too small and inconveniently arranged. The station-houses in the following precincts are rented by the District:

	Per annum.
No. 1, at a rental of .....	\$780
No. 2, at a rental of .....	1,060
No. 5, at a rental of .....	1,200
No. 6, at a rental of .....	1,000
No. 7, at a rental of .....	960
Police headquarters, at a rental of .....	900
Substation, Uniontown, at a rental of .....	60
Making a total of .....	5,960



The District government own the buildings used as station-houses in the third, fourth, and eighth precincts.

The most objectionable feature of the rented station-houses is the close proximity of the sleeping-rooms of the officers and privates to the cells and lodging-rooms; in many cases these rooms are directly over the cells. The foul air and bedlamite noises render sleep and rest impossible.

The greatest attention is paid to the cleanliness of these cells, and in the daytime they are comparatively inoffensive, but when occupied, and this is, of course, in a greater degree during nights, and mainly with the lowest and most loathsome of criminals and itinerants, they are offensive and noisy in the extreme; the men are deprived of their much-needed rest, and have been forced, during the summer months, to leave their beds and seek the fresh air and comparative quiet of the roofs. The erection by the District government of buildings to take the place of those now rented, and built in accordance with the purposes for which they are to be used, is respectfully recommended.

#### REFORM SCHOOL.

Attention is again directed to the lack of capacity of the Reform School. Frequently incorrigibles are, from inability to accommodate them, returned to their parents or guardians, to again fall into the hands of this department. This is very unfortunate, for many become hardened in crime who might, through the humane care of the institution, be reclaimed.

#### LIGHTING DARK ALLEYS.

The necessity of providing light for numbers of alleys is again brought to the attention of the Commissioners.

Very many of the alleys in the city are totally unprovided with lamps, and it so happens that they are peopled with the worst classes, doubtless largely due to the fact that they are without light; fleeing culprits often escape by means of these alleys, dodging into them, easily eluding pursuing officers in the impenetrable darkness. Were they so furnished with light as to be plainly under the eye of the patrolman, they would soon become regenerated into decency and not be the haunts of crime and vice they now are.

#### AUTHORITY TO ISSUE WARRANTS OF ARREST.

The department is often greatly embarrassed and justice often defeated through restriction in the issuance of warrants of arrest. The police court alone issues such warrants without charge. Should a case arise requiring the issue of a warrant after the adjournment for the day of the police court, delay is necessitated until the next opening of said court, thereby giving opportunity for the escape of the offender, or recourse must be had to a justice of the peace. Justices usually close their offices on the adjournment of court. Should the applicant be successful in finding a justice of the peace, the warrant is obtained at a cost of fifty cents. The amount is not exorbitant, but to the poor, and it is the poorer classes who have occasion for warrants, it is oftentimes beyond their means. To the poor, warrants of arrest should not be an expense. In view of the above, it is respectfully suggested that the power to issue warrants of arrest be vested in the captain and lieutenants of police, without additional compensation to them or cost to the applicants.

## REFORMATORY FOR GIRLS.

In this, the capital of a great and growing country, there is not an institution for the reformation of erring young women. This department is very frequently called upon to seek out the hiding-places of truant young girls; when found, perforce, for the want of a place in which an attempt can be made at their reclamation, they are returned to their parents or guardians, to again meet and mingle with the same vicious companions and, in too many cases, to return to their evil ways. Could they have been submitted to the counsel and encouragement afforded by a well-conducted reformatory, their reclamation would be more than probable. Once founded, an institution of this character could, it is believed, be made self-supporting by the labor of the inmates in the various light employments, plain and fancy needle-work, &c., to which women are adapted, and at the same time be the means of teaching them a method of honestly earning their living when discharged. The House of the Good Shepherd, in Baltimore, an institution of the character suggested, under the auspices of the Roman Catholic Church, has kindly taken many cases of abandoned young girls from this city, but it cannot, in justice to the demands of its own city, by any means respond to the calls of this department.

## CITY HOSPITAL.

As in previous reports, attention is directed to the necessity for a free city hospital. There is no place to which the suddenly sick or otherwise disabled can be sent for immediate treatment. The Freedmen's Hospital and the hospital in connection with the Washington Asylum are the only places that at present can be used, both remote, and both designed for special classes.

The establishment of a free city hospital, having in connection a free dispensary, is urgently needed.

## SAINT ANNE'S ASYLUM.

The superintendent again has to express the gratitude and indebtedness of the department to this institution; it has readily responded to all calls made upon it, and many infants there find a kindly home, who would otherwise be cast upon the doubtful charity of the public.

## MOUNTED FORCE.

On the 10th of September, 1878, by authority of the Commissioners of the District of Columbia, the mounted force was increased to 52 men, all told. This has enabled the Superintendent to more thoroughly patrol the county beats of the second, third, and seventh precincts, where, from the sparse settlement and marauding character of the lower classes, the services of mounted patrolmen were greatly needed. Their services in the city have been none the less valuable. Enabled to cover vastly more ground than footmen, they (with the exception of the beat extending the length of Pennsylvania Avenue, from Capitol gate to Seventeenth street northwest), have not been confined to beats, but have been constantly moving throughout the precincts. Their importance in cases of fire is conspicuous; they are, of course, enabled to reach the scene much earlier than footmen, and can, from their seats in the saddle, with much more ease control the excited crowds always in attendance.

They have been very efficient in other respects, notably in the frequent visits they are enabled to pay the public parks. Since the increase, complaints of lawlessness in and about the public squares have been much less frequent.

#### AMBULANCE SERVICE.

Since my last report the police ambulance has been established. Its duties consist in furnishing transportation to the suddenly sick or otherwise disabled on the streets, conveyance of insane patients to the asylum, the transfer to the hospitals, on permits, of indigent sick, hauling to station-houses, if turbulent, ungovernable "drunks," male and female, &c. It is constantly, day and night, in requisition. The value of its services is immeasurable. In this connection it is most respectfully but earnestly urged that the pay of the driver of this ambulance be increased to \$50 per month. He receives at present but \$35, a compensation very much, in the opinion of the Superintendent, inadequate to the services rendered. He is constantly on duty, day and night, thoroughly understands his business, and is always cheerful and ready in the performance of it.

#### INFIRM AND DISABLED.

The necessity for some provision for infirm and disabled policemen is from year to year becoming more apparent. There are many on the force who from long service and advancing years are become physically incapable. They can make but a pretence of doing duty, however strong the spirit, and stern the sense of duty. As far as the interests of the public would permit they have been assigned to day post duty; but there are more men who should have posts of easy duty than there are places to which to assign them. It seems but just and humane that such men should be retired from the service and properly cared for, leaving their places to be filled by younger, able-bodied men. The following table exhibits the year of appointment of the 200 patrolmen:

1861 .....	12	1872 .....	7
1862 .....	4	1873 .....	13
1863 .....	1	1874 .....	7
1864 .....	6	1875 .....	18
1865 .....	2	1876 .....	9
1866 .....	7	1877 .....	4
1867 .....	23	1878 .....	27
1868 .....	8	1879 .....	14
1869 .....	13		
1870 .....	10		200
1871 .....	15		

#### TRAMPS.

As the cold weather approaches the tramp seeks the city, and soon, as in former years, we shall be overrun. The question what to do with him is a serious and awkward one. The station-houses and night lodging-houses are nightly filled with them. Many have to be denied shelter through lack of accommodation, thus casting adrift to prey upon the public a class who, if not already bad and depraved, soon become so through hardship and want. A place of detention for such is an institution greatly needed; a place where for shelter and food they can be compelled to render an equivalent in public labor, as in breaking stone for highways, sawing wood for public offices, cleaning such streets as do

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not come within the terms of the contract with the street-cleaning contractor.

In this connection it is recommended that a part of the regimen of the workhouse be the compulsory labor of the inmates in some public work. The well-fed idleness of 30, 60, or 90 days is but a poor corrective to a majority of the prisoners.

There have been cited before the trial committee on complaints preferred, 55 members of the force, as shown in the following table:

## CHARGE.

Neglect of duty and violation of rules and regulations.....	3
Gross neglect of duty.....	3
Intoxication and habitual violation of rules and regulations.....	1
Intoxication.....	10
Neglect of duty.....	13
Conduct unbecoming policemen.....	16
Violation of rules and regulations.....	5
Gross neglect of duty and intoxication.....	3
Insubordination.....	1
	<hr/> 55

## SENTENCE.

Charges dismissed.....	29
Dismissed the force.....	7
Reprimanded.....	5
Resigned (under charges).....	2
Fined \$10 each.....	4
Fined \$20 and reprimanded.....	1
Fined \$25.....	1
Fined \$30.....	2
Fined \$50 and reprimanded.....	1
Reduced in grade.....	1
Charges withdrawn.....	2
	<hr/> 55

## ESTIMATES FOR FISCAL YEAR ENDING JUNE 30, 1881.

Pay-roll.....	\$284, 496
Rents.....	5, 960
Fuel.....	1, 500
Stationery.....	1, 000
Gas.....	1, 500
Repairs to station-houses.....	1, 200
Telegraphing.....	100
Transportation of prisoners.....	350
Transportation of non-resident indigents.....	5, 000
Ice.....	150
Washing.....	350
Meals for prisoners.....	1, 000
Photographs.....	50
Printing and binding.....	500
Rent of telephones.....	305
Expense of ambulance team, shoeing, feed, and repairs to ambulance and van.....	565
Detection and prevention of crime.....	2, 000
Supplies and contingencies.....	3, 000
Inspector of licenses.....	1, 095
	<hr/> 310, 121

In conclusion, the Superintendent desires to call attention to the slight difference in pay of the rank and file of the department. As now established, privates of second class receive \$1,080 per annum, sergeants \$1,140, and lieutenants \$1,200 per annum, and the anomaly is seen of a lieutenant in charge of the detectives, and responsible for the business

committed to that branch of this department, at a compensation of \$120 per annum less than the detectives receive. The lieutenants in their respective precincts are charged with great responsibilities; they bear the same relation to the citizens and the force, and have the same duties and responsibilities that captains of police in the larger cities, as New York, Philadelphia, Boston. The sergeants have the same duties and bear the same relations as lieutenants and roundsmen in the cities named; it is recommended that the pay of these officers be rescaled as follows:

Lieutenants, \$1,500 per annum.

Sergeants, \$1,320 per annum.

The report of Sanitary Officer Connell is inclosed as a part of this report; all of the recommendations made by that officer are earnestly approved.

THOS. P. MORGAN,

*Major and Superintendent Metropolitan Police.*

The Hon. COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

#### APPENDIX L 1.—Operations of the Police Department.

No. 1.—Table showing the disposition of the force.

Precincts.	Major and Superintendent.	Captain and Inspector.	Lieutenants.	Sergeants.	Acting sergeants.	Privates.	Detailed.	Vacancies.	Total.
First .....			1	3	1	24	2		21
Second .....			1	1	2	19			23
Third .....			1	3		16	3		23
Fourth .....			1	2	1	16	2		22
Fifth .....			1	3	1	30	4		39
Sixth .....			1	2	1	19	3		26
Seventh .....			1	3		22	2		28
Eighth .....			1	3	1	29	1		35
Police court .....	1	1							2
Detectives .....			1						1
Sanitary .....			1			6			7
Sanitary .....						1			1
Total .....	1	1	10	20	7	182	17		236

No. 2.—Table showing time lost by sickness and other causes.

Precincts.	Sick.	With leave.	Without leave.	Days.
First .....	465	151	4	620
Second .....	442	118	2	562
Third .....	391	117		508
Fourth .....	307	112	1	420
Fifth .....	426	254	2	782
Sixth .....	181	170	6	357
Seventh .....	450	101		551
Eighth .....	448	219		667
Tenth .....				
Detectives .....	75	6		81
Sanitary .....		3		3
Total .....	3,185	1,251	15	4,451

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No. 3.—Table showing number of arrests in each precinct.

Precincts.	Males.	Females.	Total.
First .....	1,340	347	1,687
Second .....	884	168	1,052
Third .....	787	124	911
Fourth .....	1,078	180	1,258
Fifth .....	3,177	530	3,707
Sixth .....	1,018	116	1,134
Seventh .....	1,118	89	1,207
Eighth .....	996	150	1,146
Sanitary .....			
Detectives .....	438	70	508
Total .....	10,826	1,774	12,610

No. 4.—Table showing the ages of the males arrested classified.

Precincts.	From 10 to 20.	From 20 to 30.	From 30 to 40.	40 and over.	Total.
First .....	289	511	283	258	1,341
Second .....	236	294	159	196	885
Third .....	135	297	171	184	787
Fourth .....	262	351	224	239	1,076
Fifth .....	551	1,035	787	804	3,177
Sixth .....	312	361	175	170	1,018
Seventh .....	258	361	251	248	1,118
Eighth .....	264	309	189	234	996
Sanitary .....					
Detectives .....	132	161	84	61	438
Total .....	2,439	3,680	2,323	2,394	10,836

No. 5.—Table showing the ages of the females arrested classified.

Precincts.	From 10 to 20.	From 20 to 30.	From 30 to 40.	40 and over.	Total.
First .....	50	164	71	61	346
Second .....	45	67	33	22	167
Third .....	17	38	30	39	124
Fourth .....	28	61	38	55	182
Fifth .....	107	229	100	94	530
Sixth .....	20	56	28	12	116
Seventh .....	9	24	33	23	89
Eighth .....	35	46	45	24	150
Sanitary .....					
Detectives .....	41	14	10	5	70
Total .....	352	699	388	335	1,774

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## No. 6.—Recapitulation of offenses classified.

Offenses against the person.	Males.	Females.	Total.
Assault .....	110	27	137
Assault and battery .....	1,141	258	1,399
Assault and battery with intent to kill .....	81	5	86
Accessory to murder .....	3	1	4
Assaulting policeman .....	35	3	38
Attempt at suicide .....	1	1	1
Attempt at rape .....	9	1	9
Affray .....	175	17	192
Abandonment .....	1	1	1
Abduction .....	1	1	1
Bastardy .....	1	1	1
Bigamy .....	1	1	1
Conspiracy .....	2	2	2
Contempt of court .....	1	1	1
Carrying concealed weapons .....	54	19	73
Disorderly conduct .....	78	3	81
Deserters .....	780	191	971
Enticing prostitution .....	22	2	22
Fighting in the streets .....	8	2	10
Fast driving .....	24	2	26
Fugitives from justice .....	75	23	98
Fugitives from parents .....	6	6	12
Fugitives from reform school .....	12	12	24
Fugitives from insane asylum .....	3	3	6
Intoxication .....	3,109	244	3,353
Intoxication and disorderly .....	507	155	662
Idle and incorrigible .....	13	13	26
Insanity .....	30	8	38
Indecent exposure of the person .....	56	56	112
Indecent assault .....	4	4	8
Interfering with policemen .....	3	1	4
Keeping bawdy house .....	1	19	20
Keeping gambling house .....	16	16	32
Keeping disorderly house .....	2	2	4
Keeping policy shop .....	13	13	26
Miscellaneous misdemeanors .....	33	15	48
Murder .....	14	14	28
Mayhem .....	1	1	2
Perjury .....	8	3	11
Profanity .....	207	72	279
Pickpockets .....	9	9	18
Rape .....	9	9	18
Rioting .....	3	3	6
Resisting officer .....	17	17	34
Robbery .....	7	7	14
Selling lottery tickets .....	16	16	32
Threats of violence .....	221	88	309
Vagrancy .....	574	232	806
Witnesses .....	151	33	184
Total .....	7,644	1,426	9,070

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## No. 7.—Recapitulation of offenses classified.

Offenses against property.	Males.	Females.	Total.
Arson .....	3	.....	3
Attempt at arson .....	1	.....	1
Attempt to steal .....	3	.....	3
Burglary .....	31	.....	31
Cruelty to animals .....	12	1	13
Destroying private property .....	7	1	8
Embezzlement .....	16	.....	16
Forgery .....	10	.....	10
Gambling .....	2	.....	2
Grand larceny .....	117	25	142
Highway robbery .....	9	.....	9
Malicious mischief .....	58	5	63
Obtaining goods or money by false pretenses .....	29	2	31
Passing counterfeit money .....	9	.....	9
Petit larceny .....	876	144	1,020
Receiving stolen goods .....	24	7	31
Suspicion .....	570	67	637
Trespass .....	104	8	112
Violation of United States revenue law .....	1	.....	1
Violation of United States election law .....	6	.....	6
Violation of District ordinances .....	1,307	85	1,392
Total .....	3,195	345	3,540

## No. 8.—Nativity of those arrested classified.

Nativity.	Number.	Nativity.	Number.
United States, white .....	6,531	Switzerland .....	4
United States, colored .....	4,125	Turkey .....	4
Ireland .....	1,319	China .....	1
Germany .....	396	Spain .....	1
England .....	126	Italy .....	8
France .....	18	Austria .....	7
Scotland .....	39	Russia .....	2
Norway .....	3	Sweden .....	3
Canada .....	6	Mexico .....	2
Denmark .....	3	Wales .....	1
Hungary .....	2	Persia .....	5
Holland .....	2		
Belgium .....	2		
		Total .....	12,610



No. 9.—Table showing trades and callings of persons arrested.

Occupation.	No.	Occupation.	No.
Artists.....	1	Lamp-lighters.....	2
Apprentices.....	13	Locksmiths.....	11
Auctioneers.....	8	Laundresses.....	6
Agents.....	104	Letter-carriers.....	1
Architects.....	2	Merchants.....	114
Actors.....	3	Machinists.....	85
Botanists.....	1	Musicians.....	15
Boatmen.....	71	Millers.....	9
Barbers.....	85	Messengers.....	25
Barkeepers.....	86	Magistrates.....	2
Blacksmiths.....	165	Marines.....	33
Bricklayers.....	225	Molders.....	34
Brick-makers.....	12	Masons.....	19
Butchers.....	84	Ministers.....	1
Bakers.....	78	Newsboys.....	84
Bookbinders.....	13	Nurses.....	1
Brewers.....	4	Occupation unknown.....	664
Broom-makers.....	3	Oystermen.....	1
Basket-makers.....	1	Peddlers.....	63
Boiler-makers.....	9	Printers.....	178
Builders.....	5	Physicians.....	42
Brokers.....	11	Plasterers.....	172
Bill-posters.....	1	Prostitutes.....	584
Bankers.....	1	Painters.....	270
Butter-dealers.....	2	Pavers.....	13
Brass-finishers.....	5	Policemen.....	6
Bailiffs.....	2	Pattern-makers.....	2
Carpenters.....	265	Plumbers.....	98
Clerks.....	516	Photographers.....	6
Cigar-makers.....	42	Porters.....	19
Confectioners.....	8	Paper-hangers.....	5
Contractors.....	33	Policy-dealers.....	2
Coach-makers.....	7	Paper-makers.....	1
Cabinet-makers.....	16	Plate-printers.....	1
Cartmen.....	6	Restaurant-keepers.....	48
Constables.....	9	Rag-pickers.....	9
Coopers.....	10	Riggers.....	3
Clock-makers.....	7	Reporters.....	46
Calkers.....	2	Sextons.....	3
Cooks.....	49	Soldiers.....	135
Conductors.....	10	Servants.....	650
Cattle-brokers.....	5	Shoemakers.....	151
Carvers.....	1	Slaters.....	3
Distillers.....	1	Stone-cutters.....	130
Dress-makers.....	5	School-teachers.....	11
Dentists.....	9	Sailors.....	172
Dairymen.....	36	Saddlers.....	6
Drovers.....	15	Students.....	22
Dyers.....	3	Shoeblocks.....	90
Druggists.....	6	Sail-makers.....	6
Drivers.....	142	Seamstresses.....	8
Draughtsmen.....	2	Storekeepers.....	72
Engineers.....	24	Ship-carpenters.....	2
Engravers.....	6	Schoolboys.....	402
Fishermen.....	17	School-girls.....	18
Farmers.....	133	Tailors.....	63
Firemen.....	8	Teamsters.....	26
Foremen.....	1	Tinners.....	107
Florists.....	2	Tobacconists.....	3
Grocers.....	58	Telegraphists.....	9
Gardeners.....	33	Tanners.....	2
Gamblers.....	10	Thieves.....	414
Harbor-masters.....	2	Tinkers.....	5
Hackmen.....	77	Upholsterers.....	41
Hatters.....	7	Undertakers.....	3
Hotel-keepers.....	18	Vagrants.....	58
Hucksters.....	237	Washerwomen.....	4
Housekeepers.....	481	Wheelwrights.....	10
Hostlers.....	35	Watchmen.....	38
Harness-makers.....	15	Whitewashers.....	1
Jewelers.....	14	Waiters.....	51
Junk-shop keepers.....	15	Watch-makers.....	20
Janitors.....	6	Weavers.....	2
Laborers.....	3,748		
Lawyers.....	46	Total.....	12,610
Livery-stable keepers.....	13		

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## DISPOSITION OF CASES.

Number of cases in which fines were imposed .....	3,853
Amounting to.....	\$28,684 35
Amount paid in United States cases .....	\$5,872 86
Amount paid in District of Columbia cases .....	9,453 42
United States cases appealed.....	3,386 57
District of Columbia cases appealed.....	9,971 50
Dismissed .....	5,342
Surrendered to military authority.....	7
Surrendered to naval authority.....	1
Surrendered to Maryland authority.....	15
Surrendered to Virginia authority.....	15
Surrendered to Industrial School.....	4
Surrendered to Reform School.....	13
Surrendered to United States marshal.....	1
Surrendered to insane asylum.....	26
Surrendered to workhouse.....	17
Surrendered to parents.....	44
Sent to jail.....	951
Sent to workhouse.....	1,537
Sent to House of Good Shepherd, Maryland .....	1
Sent to Reform School.....	53
Bonds to keep the peace.....	210
Bonds for grand jury.....	180
Bonds, personal.....	68
Appealed to criminal court.....	43
Not disposed of.....	103
<i>Nol pros.</i> entered.....	81
Miscellaneous.....	42
Sentence suspended.....	3
Total.....	12,610

## RECAPITULATION.

Total number of arrests .....	12,610
Males.....	10,839
Females.....	1,771
Married.....	4,275
Single.....	8,335
Could read and write.....	8,497
Could not read and write .....	4,113

Offenses against the person were committed by 7,648 males and 1,426 females.

Offenses against property were committed by 3,191 males and 345 females.

## INCIDENTALS.

Lodgers accommodated.....	12,907
Accidents reported.....	327
Assistance rendered.....	221
Sudden deaths reported.....	4
Fires attended.....	156
Inquests attended.....	41
Lost children returned to parents.....	154
Loads of coal weighed.....	1,174
Horses, vehicles, &c., taken up and restored to owners.....	310
Doors and windows found open and secured.....	260
Abandoned infants found.....	11
Attempt at suicide.....	5
Sunstroke.....	1
Dead bodies found.....	100

## APPENDIX L 2.

## REPORT OF THE SANITARY OFFICER.

## DEPARTMENT OF METROPOLITAN POLICE,

## SANITARY OFFICE,

*Washington, D. C., October 8, 1879.*

SIR: I have the honor to submit herewith a report of the operations of this office from June 30, 1878, to June 30, 1879.

The duties of the office are various, inasmuch as every one in distress, whether on account of poverty or otherwise, generally applies to police headquarters for assistance. This, unfortunately, cannot always be given to them; but whether or no, their story must be listened to, even at the expense of precious time, and with the additional mortification of being frequently compelled to inform them there is no provision for their relief. The daily duties of this office are, however, principally confined to providing for the sick poor, especially those who have no friends, and who are compelled to go to hospital for treatment; this of course includes the indigent insane of the District, as well as quite a number of non-resident insane who wander here from different parts of the country, and who are found in our midst in a deplorable condition. These especially are a source of great annoyance and trouble as well as expense to the District, as under the law the District has to defray the entire cost of their support in the asylum for the insane until their legal place of residence is ascertained, a matter which is very difficult, and sometimes impossible, owing to the fact that many of them are not possessed of mind enough to give an account of their friends or place of residence. The latter of course have to be kept in the asylum until they get better or die, while those whose residence can be ascertained are conveyed under escort to such residence and turned over to their friends, if they are found to have any, or to the authorities of the place.

In my last annual report I stated that the cost of transporting these people to their homes as well as supporting them while in the asylum has to be borne entirely by this District, and while it is much cheaper to send these people home than to support them here, it is scarcely just to compel the District to defray either the expense of supporting them in hospital or transporting them to their homes, as they cannot be considered in any sense as wards of the District, but rather of the several States. I therefore again suggest the propriety of calling the attention of Congress to the above facts, who would readily see the injustice of the matter, and no doubt make a special appropriation to meet such cases.

There are still others whose daily appeals are no less striking to the sympathy of humanity, which this office is charged with examining into their merits or demerits, and these are persons who are deluded to come into this city in hopes of getting employment or who have some claim against the government: for instance, soldiers applying for pensions, and who think by coming to Washington they will accomplish that which they have for years failed in; so they manage in some way to get means enough to bring them here, thinking they will succeed in obtaining what they think is justly due them; and in case they should not, that the government which they served so faithfully would at least give them enough to return to their homes or enable them to do so. Subsequent experience teaches them otherwise, for they find after arriving here that they not only fail in obtaining the object of their mission, but that the general government has made no provision whatsoever by which they could be sent to their homes.

What is the result? They apply like all others to the police authorities to assist them, and as they are not "tramps," and cannot be classed as such, "being simply subjects of adverse circumstances," they must be treated with the consideration due to humanity, and, therefore, it has been the practice of this office to extend to these people, or at least to the most distressed ones among the number (for assistance could not be given to one applicant out of five), relief by way of transportation to or towards their homes, upon the approval of the same by the Commissioners of the District of Columbia. Of course the cost of such transportation is borne by the District, but inasmuch as these are natives or residents of the different States, and, furthermore, inasmuch as the greater number of such applicants have some claim, directly or indirectly, on the bounty of the United States Government, many of them being soldiers, a soldier's widow, or orphan, would it not be well to present the matter in its proper light to Congress, with a view of getting that body to appropriate a sufficient amount to relieve the sufferings of this class of worthy poor, and thus relieve the District from the expense of rendering assistance to a class of persons who have no claim upon it whatever, other than humanity.

I respectfully but earnestly request that the attention of Congress be called to the fact that section 248, page 947, Revised Statutes of the United States, provides that affidavits as to the insanity and indigency of the resident insane of this District must be taken before a judge of the criminal or circuit court, or before a justice of the peace of said District; consequently this office, and in fact the general public, are greatly inconvenienced, especially since the reduction of the number of the justices of the peace to fifteen; and, moreover, as the latter charge \$1 for administering these affidavits, which is really more than a poor person can afford to pay. I therefore suggest that the section be amended by inserting the words or "notary public" after those of justice of the peace, and thus not only facilitate the business of this office, but relieve the general public from an unnecessary annoyance.

I also wish to call attention to the urgent necessity of having erected in this District an inebriate asylum, where confirmed inebriates could be confined, treated, and cared for. The growing necessity for such an institution is more and more apparent every day, more especially when it is known, that the doors of the Government Hospital for the Insane are closed against the admittance of persons whose temporary insanity is the immediate effects of alcohol. This action of Dr. Godding, the superintendent, is, I believe, the result of a conference with the District Commissioners, and is of course entirely proper, as inebriates are not considered by the medical profession as insane persons who should be confined and treated in an asylum for the insane, more especially when that institution is overcrowded now with insane cases, its capacity being only about 600, while the number treated therein is 850.

Such being the condition of the hospital for the insane, and as there is no other hospital or institution within the District to which these people could be sent and confined against their will, the question which concerns this whole department the most is, What shall we do with them? for they finally are turned over to us after all efforts on the part of their friends to care for or convert them have failed, to dispose of them in some way. This office has frequently sent cases of this kind to the Providence Hospital, to the Freedmen's Hospital, and to the Washington Asylum Hospital, where they were kindly received and treated, but upon recovering from their drunken condition they demanded their liberty, which could not be denied them, and have been found by the offi-

cers of the department the next day in as bad and deplorable condition as they were when sent to the hospital a few days before.

I know of some of these unfortunate creatures who are respectably connected, and whose friends have exerted every effort and used all means in their power to restore them to manhood, who have to be arrested the next day after their release from the workhouse and sent down for another term of ninety days, and thus spend their whole life, or nearly so, a prisoner in that institution.

It might be said, why not send them to the other hospitals and treat them there; but to one of any experience such a proposition is impracticable, for the reason that it would be an injustice to other patients in such hospitals to put a man suffering with *mania a potu* in the same ward with them, more especially with patients suffering with diseases of such a grave nature as typhoid fever, pneumonia, and nervous diseases, &c. Therefore humanity demands that there should be some separate institution wherein these poor unfortunate people could be cared for, as the greater number of suicides, if not all, which occur in our midst are among those suffering from the effects of alcohol, and whose lives would be saved if the persons could be confined in an institution of this kind until reason could be restored; and not only that, but many of them would in a few years be remodeled, so to speak, and return to their position in society, and become not only respectable and honorable but useful citizens.

During the past fiscal year there has been provided for the use of this office an ambulance, in which the sick poor have been conveyed or removed to the several hospitals and asylums. In addition to the removal of those cases to the above institutions, numbering 591, there have been calls for the ambulance to remove a number of cases from the scene of accident, and from the several dispensaries, to their private residence, averaging about four such cases per week.

It will thus be seen that the necessity of such mode of conveyance was absolute, and that the work which has been performed by it is more than was expected; which is entirely due to the prompt, efficient, and cheerful manner in which the driver, Mr. L. Weedon, has performed his duties, arduous as they are often found to be. In view of this fact, I respectfully recommend that Mr. Weedon's compensation be increased to at least \$50 per month, as that which he now receives, \$35 per month, is not in proportion to the services he performs, and is entirely inadequate for the maintenance of his family.

The following statement will show the number of sick and destitute persons sent to the several hospitals and asylums, and the nativity of the same; also the number of non-resident paupers furnished with transportation towards their homes:

*Number of sick and destitute persons sent to the several hospitals and asylums during the year ending June 30, 1879.*

To Washington Asylum .....	364
To Freedmen's Hospital .....	169
To Providence Hospital .....	137
To Government Hospital for the Insane .....	115
To Children's Hospital .....	10
To Columbia Hospital .....	5
To Mount Hope Retreat, Maryland .....	1
Total .....	801

*Nativity of persons sent to hospitals and asylums for the above period.*

United States.....	376
Ireland.....	147
Germany.....	119
England.....	47
Scotland.....	25
Poland.....	15
Russia.....	14
Switzerland.....	12
Denmark.....	10
Canada.....	10
France.....	6
Holland.....	6
Spain.....	5
Portugal.....	4
Norway.....	4
Cuba.....	1
Total.....	801

The number of non-resident paupers furnished with transportation to other cities, procured from the Commissioners of the District of Columbia, was 218.

Respectfully submitted.

JOHN CONNELL,  
*Sanitary Officer Metropolitan Police.*

THOMAS P. MORGAN,  
*Major and Superintendent Metropolitan Police.*

## M.—REPORT OF BOARD OF TRUSTEES OF PUBLIC SCHOOLS.

OFFICE OF THE BOARD OF TRUSTEES  
OF PUBLIC SCHOOLS,  
*Franklin Building, Washington, November 11, 1879.*

GENTLEMEN: The board of trustees, in response to your communication of September 9, requesting "estimates of the necessary expenses of conducting public schools for the fiscal year ending June 30, 1881, with such information and suggestions as to their present condition and wants as you may deem important," has the honor to submit the following report and recommendations, with an estimate of the amount that will be required for the support of the public schools in the District of Columbia for the fiscal year ending June 30, 1881:

The number of youth of school age (6 to 17, inclusive) in the District of Columbia, according to the census of 1878, was: White, 26,426; colored, 12,374; total, 38,800.

The whole number of pupils enrolled in the public schools for the school year ending June 30, 1879, was: White, 16,085; colored, 9,045; total, 25,130; increase over the enrollment of last year, 2,288.

The average number of pupils enrolled in the public schools for the school year ending June 30, 1879, was: White, 13,114; colored, 7,275; total, 20,389; the increase over last year was 1,430.

The number of teachers employed for the school year ending June 30, 1879, was: In the white schools, 261; in the colored schools, 141; total, 402.

The total expenditures for the support of the public schools for the school year ending June 30, 1879, were \$368,343.46, including \$2,751.69

paid as interest on the loan from the trustees of the Linthicum Institute.

The number of school-rooms owned is: For white schools, 142; for colored schools, 96; total, 238.

The number of school-rooms now rented is: For white schools, 102; for colored schools, 27; total, 129.

ESTIMATE OF EXPENSES FOR THE SUPPORT OF PUBLIC SCHOOLS FOR THE FISCAL YEAR ENDING JUNE 30, 1881.

Salaries of teachers and superintendents .....	\$315,000
Wages of janitors and sweeps .....	25,000
Rent .....	35,000
Fuel .....	14,000
Repairs .....	20,000
General supplies .....	15,000
Insurance .....	2,500
Printing .....	4,500
Secretary and clerks .....	2,000
Miscellaneous expenses .....	5,000
Interest on Linthicum loan .....	2,400
School buildings for white schools, two in second division .....	89,200
School buildings in sixth division .....	10,000
School buildings in seventh division (colored) .....	72,000
Total .....	611,600

Year after year the attention of the District authorities and of Congress has been called to the urgent want of school buildings. Last year a response was received in the shape of an appropriation of \$75,000 for two buildings, now in the course of erection in the first and the third divisions, but there has been no relief afforded the other suffering divisions. Especially deserving your consideration are the second, sixth, and seventh divisions. There are 54 rooms now under rental in the second division; the sixth has no adequate accommodations, and is also subject to a heavy rental; and the seventh is in equal need of a school building in Washington and Georgetown.

The immediate erection of additional school buildings in these divisions will not only be an act of justice to our school population, but a measure of the wisest economy. It would be better to borrow the money or issue bonds, and build, than continue the present rental system. The annual interest upon such loans or issue would be less than the annual rentals paid and to be paid.

In referring to the wants of the respective divisions we would respectfully call your attention to a question of apportionment, which arose in the discussion of this report, with the following conclusion on the part of the majority of this committee, namely: That if the act of July 23, 1866, is in force, and also applicable to the funds appropriated for the erection of the Curtis, Henry, and L'Enfant buildings, there is due the colored-school fund the sum of \$72,000 or thereabouts.

We would respectfully urge upon your honorable body the propriety of procuring the donation of Corcoran square for school purposes. It is idle in respect to its dedication for market purposes, and is situated in the division where a school building is most urgently needed.

There is, among the general wants of the public schools, a peculiar need of accommodations for the normal and two advanced grammar schools. A separate building for these three institutions would tend to relieve, to a slight extent at least, the first and second divisions; but that they should be supplied with their own facilities is the first consideration for recommending that what is known as the Washington City

school-fund, amounting, we believe, to about \$60,000, be donated to this purpose.

We would also call your attention to the too strict limitation of the appropriation of the past year, and the embarrassments incident to this new policy, and would respectfully suggest the recommendation of a provision whereby the unexpended balances of appropriations for the current fiscal year may be used for such school purposes as the exigencies of the situation and condition of affairs may require.

B. G. LOVEJOY,  
*Chairman Special Committee.*  
CHARLES M. MATTHEWS,  
*President Board of Trustees.*

Attest:

JOHN H. BROOKS,  
*Secretary.*

The Hon. COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

## N.—REPORT OF THE COMMISSIONER OF THE WASHINGTON ASYLUM.

OFFICE OF THE COMMISSIONER  
OF THE WASHINGTON ASYLUM,  
*Washington, D. C., October 10, 1879.*

GENTLEMEN: I submit herewith the reports of the intendant and visiting physician for the fiscal year ending June 30, 1879, showing in detail the work accomplished and improvements made in their respective departments during the preceding twelve months, presenting interesting statistics, pointing out defects in the present arrangement and management of the institution, and making valuable suggestions for its increased efficiency, to all of which I earnestly request your careful attention.

Since my last report the north wing of the new workhouse has been finished, and is now occupied by the male prisoners. The necessity for an additional wing in which to keep the female prisoners is daily becoming more urgent. This latter class is at present, as heretofore, confined in the old asylum building. It is needless to dwell upon the injustice and inconsistency of confining under one roof the degraded women who enter our workhouse and the unfortunate poor who appeal to our charitable consideration. I estimate the cost of an additional wing to the workhouse at \$16,000.

In my last annual report I advocated the purchase of about 300 acres of land on the east side of the Eastern Branch for agricultural and sanitary purposes. No action has, to my knowledge, been taken on that recommendation, but of so much consequence do I deem this subject that I cannot refrain from again urging you to consider it. The last weekly report of this institution shows an aggregate of 337 inmates, and the number will increase largely during the colder months. But few of the prisoners or inmates are skilled mechanics, and the longest term of imprisonment which can be imposed under the law is ninety days. We have to-day but five or six acres of arable land. To support these people without occupation is mischievous and absurd. Their enforced idleness not only renders it difficult to maintain proper discipline, but tends to disqualify them for earning an honest living by manual labor.



In short, the effect is disastrous both physically and morally. One of the problems with which the District government has struggled, not altogether successfully, is the devising of economical means for the collection and disposition of night-soil and garbage, giving careful consideration to its sanitary aspect. At present, as I am informed, this material is towed several miles down the river, where it is dumped into the water. This method of disposition is both costly and wasteful, while, during some portions of the winter-months, owing to the closing of the river, it has proved impracticable, and has greatly embarrassed the health officer in his efforts to keep the city in good sanitary condition. All garbage, night-soil, and other offal could be landed at a convenient wharf on the Eastern Branch, where the workhouse prisoners would receive it and carry it to a proper place of deposit. It could afterwards be used as a fertilizer for the farm, and possibly some portions could be manufactured for commercial purposes. The land is so far from the city that no nuisance would be created, while large crops could not fail to be produced by the labor of men who otherwise must be supported in idleness by the District. In the mere cost of transportation a considerable saving would be made. It seems to me too evident for argument that, until this land is purchased, the asylum can never become a credit to its managers or to the District, while Dr. Townshend, the health officer, coincides with my view of this subject, and considers the purchase of this land essential to the best working of the health department. I observe that Major Morgan, superintendent of the Metropolitan Police, in his present annual report, also urges the immediate necessity of providing for the employment of tramps. The observation and experience of the past two years convince me that in no way can unskilled labor be so well and profitably employed as in that above proposed.

Last year I called your attention to the necessity for the classification of prisoners and its impossibility under the circumstances, as follows :

The subject of classification of prisoners which is referred to at some length in the report of the intendant deserves careful consideration. As our laws are at present constituted all classes of petty offenders are sent to the workhouse. With our present accommodations, boys under ten years of age who have committed no greater crime than that of throwing stones or bathing in the river during the day; youths who have been led by older associates to commit an indiscretion; young men who have taken their first vicious step, and hardened criminals are of necessity thrown together promiscuously. Young girls who have fallen through weakness and ignorance are brought in hourly contact with the most abandoned prostitutes. Under these circumstances reformation is impossible. It is doubtful whether the old offenders can ever be reclaimed. The younger ones go out in a moral condition worse than that in which they entered. The institution is at present, it seems to me, little better than a school for vice.

I also suggested the propriety of requesting Congress to turn over for the use of this institution the adjoining Army and Navy magazine grounds, which have practically been abandoned. I am gratified to know that the Secretaries of War and the Navy have in official letters signified their approval of the proposed transfer. It can hardly be doubted that upon proper representation Congress will give us possession. The superintendent of police, in his report, refers to the lack of capacity of the reform school and the need of a reformatory for girls. I indorse his views as expressed. There are now in the workhouse, colored boys from eight to fourteen years of age, and girls, both white and colored, hardly older, who have been committed as vagrants, simply because there was no other place to which they could, at the time, be sent. Should the magazine grounds be obtained, I believe that the District could, at comparatively small expense, arranged the buildings thereon for the reception and attempted reformation of these classes.

The visiting physician calls attention to the unsanitary condition of the asylum building. I can do little more than emphasize his statement. In the interest of health, discipline, and morality, the building should be renovated and important changes should be made in the internal arrangements. To accomplish all that is desirable or even necessary would require a greater expenditure than could well be afforded during one fiscal year. I have, therefore, estimated for repairs to be made during the next year to the amount of \$4,000.

The following estimates for the fiscal year ending June 30, 1881, are submitted:

Addition to new workhouse.....	\$16,000
Provisions.....	16,000
Salaries.....	10,380
Fuel.....	2,000
Forage.....	1,600
Lumber and hardware.....	2,000
Shoes.....	1,000
Dry goods.....	2,200
Drugs and medicines.....	1,600
Purchase and improvement of land.....	50,000
Contingent, including addition to hospital, repairs to asylum, &c.....	8,220
Total.....	111,000

Very respectfully,

GEO. A. CASWELL,

*Commissioner of the Washington Asylum.*

The Hon. COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

#### APPENDIX N 1.

#### REPORT OF THE INTENDANT.

WASHINGTON ASYLUM, July 1, 1879.

SIR: The annual reports of the intendant and the matron of the Washington Asylum, for the fiscal year ended June 30, 1879, are herewith respectfully transmitted, and it is hoped the honorable Commissioners of this District, as well as yourself, will notice to their satisfaction that there are unmistakable marks of progress and improvement perceptible in every part of this large and important institution, and, although no increase in its area has been achieved over that of last year, its value and usefulness have been greatly enhanced.

Among the measures accomplished for the extension of its internal accommodations and facilities, and for the promotion of health and comfort among its inmates, the following shows the most conspicuous efforts made, viz:

1. The north wing of the new workhouse has been completed and supplied in a modern and improved style with fixtures, furniture, and conveniences for its occupation, and the male prisoners, at least, have been successfully removed from their old to their new quarters.

2. One thousand four hundred and seventy-three feet of a new 12-inch sewer, from the new building to the river, have been executed, and a large area has been improved by grading and draining the ground on and around its premises.

3. The frame cottage close to the south front of the new workhouse, having been donated to the institution by the United States Govern-

ment within the fiscal year, has been repaired, refitted, and enlarged by a new wing with two rooms, for the accommodation of the chief overseer, or manager, and his family.

4. About two acres of ground on the east side of the present nursery for ornamental trees along the river front, which hitherto had been lying waste, having been used by and for a few unknown parties as an unauthorized burying place, in which corpses and coffins were utterly decayed and without the slightest mark or sign of identity, have been utilized by exhuming the few existing remains and burying them decently in a separate spot of the Potter's field, and planting in the space thus gained a crop of much needed corn-fodder.

5. A row of young ornamental trees has been planted along the asylum front on Nineteenth street, and in several other favorable sites on the premises.

In addition to these and other permanent improvements there have been numerous repairs, remodelings, and alterations undertaken in various parts in and outside the main building, and several domestic arrangements as well as economical measures have been introduced, not only contributing to the general welfare of the inmates, but also causing considerable saving in current expenses, and in some cases creating even direct sources of revenue. These have been reported all in detail in the regular periodical returns, and therefore *only* the following *few* are embraced within the limited scope of this annual public report:

a. Besides the crops planted this spring, many of which cannot be gathered until after the expiration of this fiscal year, but promise much larger yield than those of last year, not overestimated at a value of about \$600 (from not more than 5 acres), there was an *ice crop* of over 300 tons, worth not less than \$500.

b. From the sale of old material, as barrels, bones, &c., a cash amount of \$142.24 accrued, which under your orders was duly paid over to the District treasurer in monthly returns.

These sums appear truly insignificant, as the *only direct* returns from this institution, in offset against the large annual cost of its maintenance; but, when referring to its indirect resources, alluded to by the intendant in his previous reports, namely, the annual yield from the nursery on its premises, representing from \$6,000 to \$8,000, and the annual enhancement of the asylum property at about \$5,000, together with the value of the prison labor of an average of 150 working days and 40 hands, at 50 cents per diem, for work done outside the premises for the benefit of the public, aggregating to \$3,000, all of which should be in justice credited to it, its economical condition does not appear as unfavorable as it might to a superficial observer.

And in regard to its present administration, though the expenditures during the year just ended have exceeded the figures provided for in last year's budget, it must be remembered that these estimates were by more than \$10,000 less than those of the preceding year, though the number of inmates has increased fully 21 per cent. within the last twenty-four months, and many substantial and permanent improvements, especially in connection with the new workhouse, have been defrayed out of the appropriation made for current expenses only.

The true economy of the present management will become evident, to its great advantage, when an impartial parallel is drawn between the current accounts of the past and the present. Then it will appear that, notwithstanding the aforesaid growth in the number of inmates and the many great improvements in their food and clothing, the aggregate amounts expended this fiscal year for nearly all the most prominent

articles of comfort or subsistence are much smaller than those of previous years. So, for instance:

The amount paid for groceries in 1877 .....	\$11,030 52
The amount paid for groceries in 1878 .....	9,733 15
The amount paid for groceries in 1879 .....	8,600 32

Which figures display a saving of \$2,430.20 in groceries alone within two fiscal years.

Nearly the same ratio of reduction shows itself in the annual accounts of other principal staples of support, as meat, dry goods, shoes, and other commodities. And that this cannot be attributed only to the natural fall in the market prices of these articles becomes manifest from the following exhibit of shoes, which were issued without regard to their cost:

	Number of inmates.	Men's shoes.	Women's shoes.
July 1, 1877 .....	258	768	156
July 1, 1878 .....	284	864	276
July 1, 1879 .....	312	528	180

There have been moreover quite a number of new ways and means created partly for the increased facilities of usefulness of the institution and its officials and partly for the greater comfort and improvement of its inmates, as:

A new telephone was acquired in place of the telegraph.

All means of conveyance have been thoroughly repaired and renovated, as carriage, dead ambulance, &c.

Four new cows have been purchased for the benefit of the hospital and almshouse, and two female calves are raised for the same purpose.

A nucleus for a library has been formed by the efforts of the intendant, who succeeded in collecting from benevolent gentlemen in the city, without cost, from 600 to 800 volumes for that purpose.

Further, a philanthropist, not connected with the asylum, gathers, at a large cost of time and money to himself, and without any reward, old newspapers and periodicals all over the city, and distributes probably two hundred and fifty and more every week as his share to the inmates of alms-house, hospital, and workhouse.

The children of becoming age, averaging from ten to twelve, are daily assembled in the intendant's residence, where they receive instruction and moral advice.

In brief, no opportunity was neglected to inculcate improvement and reform in any who may be susceptible of it, young or old, prisoner or pauper; and it is a source of pleasure to state that by no means were all efforts in vain, though with greater facilities better results might have been accomplished. Still, as it is, there are clear indications not only of physical but also of moral and intellectual growth and progress among the inmates; and profanity, quarrelsomeness, and other evils frequently prevailing in similar institutions have greatly diminished, if not entirely disappeared.

In this condition of affairs the intendant is far from claiming all credit to himself, and he gratefully acknowledges the large share you have in most of these successes, and in some he yields freely to you the whole merit of originating or completing them; yet, as the institution is still not by any means perfect, he will endeavor to aid you in further efforts for its improvement, by bringing to your attention some still existing disadvantages or defects which might have escaped your notice,

and by respectfully suggesting additional steps towards reaching the greatest possible usefulness of the institution and the best welfare of its inmates.

For this purpose now follow the most important statistics, viz:

# 1. VITAL STATISTICS.

## a.—Number of inmates.

Alms-house, paupers:		
Present July 1, 1878.....	120	
Received since July 1, 1878.....	147	
Born since July 1, 1878.....	0	
Total received to June 30, 1879.....		267
Discharged since July 1, 1878.....	122	
Deceased since July 1, 1878.....	12	
Total lost to June 30, 1879.....		134
Total paupers present.....		133
Workhouse, prisoners:		
Present July 1, 1878.....	99	
Received since July 1, 1878.....	1,893	
Total received to June 30, 1879.....		1,992
Discharged since July 1, 1878.....	1,850	
Eloped since July 1, 1878.....	38	
Deceased since July 1, 1878.....	5	
Total lost to June 30, 1879.....		1,893
Total prisoners present.....		99
Hospital patients:		
Present July 1, 1878.....	53	
Received since July 1, 1878.....	366	
Born since July 1, 1878.....	19	
Total received to June 30, 1879.....		438
Discharged since July 1, 1878.....	319	
Died since July 1, 1878.....	54	
Total lost to June 30, 1879.....		373
Total present, June 30, 1879, patients.....		65
Total present, June 30, 1879, employes.....		15
Aggregate of all inmates June 30, 1879.....		312

## b.—Comparison of numbers with the past.

Aggregate number of inmates July 1, 1877.....	258
Aggregate number of inmates July 1, 1878.....	284
Aggregate number of inmates July 1, 1879.....	312
Mean increase per annum, 27, or nearly 10 per cent.	

# 342 REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA.

## c.—Statistics of sex and color.

	ALMSHOUSE.					WORKHOUSE.				
	Paupers received every month.					Prisoners received every month.				
	White male.	White female.	Colored male.	Colored female.	Total.	White male.	White female.	Colored male.	Colored female.	Total.
1878.										
July .....	4	6	2	4	16	50	11	65	21	147
August .....	5	3	2	2	12	47	21	82	22	172
September .....	7	3	2	1	13	43	24	75	24	166
October .....	7	4	4	1	16	56	30	69	10	165
November .....	2	0	6	1	9	88	10	75	17	190
December .....	8	3	7	1	19	65	24	73	20	182
1879.										
January .....	10	4	6	4	24	30	16	46	23	115
February .....	4	1	3	1	9	48	22	45	12	127
March .....	1	6	1	1	9	63	13	71	15	162
April .....	2	1	1	0	4	47	21	53	17	138
May .....	1	0	0	4	5	53	28	67	24	172
June .....	4	2	4	1	11	48	26	54	29	157
Total .....	55	33	38	21	147	638	246	775	234	1,893

## d.—Statistics of nativity.

ALMSHOUSE.	
District of Columbia .....	31
Maryland .....	37
Virginia .....	29
New York .....	2
Pennsylvania .....	5
Kentucky .....	3
Alabama .....	3
Massachusetts .....	1
Georgia .....	1
Ohio .....	1
Missouri .....	1
Wisconsin .....	1
Ireland .....	22
England .....	3
Germany .....	5
Holland .....	1
West Indies .....	1
Total .....	147
WORKHOUSE.	
Natives:	
District of Columbia .....	473
Maryland .....	357
Virginia .....	451
New York .....	71
Pennsylvania .....	82
Massachusetts .....	12
South Carolina .....	10
Ohio .....	7
New Jersey .....	16
North Carolina .....	5
Tennessee .....	5
Kentucky .....	6
Maine .....	6
West Virginia .....	4

Illinois .....	8
Florida .....	4
Connecticut .....	8
Missouri .....	4
Georgia .....	2
Rhode Island .....	2
Alabama .....	1
Michigan .....	1
Indiana .....	4
New Hampshire .....	2
Nebraska .....	1
California .....	1
Louisiana .....	2
Total .....	1,545

## Foreigners :

Russia .....	1
Ireland .....	250
England .....	25
Scotland .....	16
Germany .....	37
France .....	2
Italy .....	5
Hamburg .....	1
Denmark .....	1
At sea .....	4
Poland .....	1
Switzerland .....	2
Sweden .....	1
East Indies .....	1
West Indies .....	1
Total .....	348

Full aggregate, 1,893.

*c.—Statistics of offenses committed.*

Name of offense.	Number.	Name of offense.	Number.
Disorderly conduct .....	552	Violating cart-law .....	5
Vagrancy .....	762	Profanity, and defacing property .....	3
Profanity .....	309	Cruelty to animals .....	2
Carrying concealed weapons .....	61	Selling liquor without license .....	3
Injuring private property .....	23	Driving through funeral procession .....	1
Injuring public property .....	3	Business without license .....	2
Throwing stones .....	24	Profanity, and firing in street .....	1
Disorderly assembly .....	23	Violating hack-law .....	1
Indecent exposure .....	37	Playing ball in street .....	1
Trespassing on park .....	21	Peddling without license .....	1
Bathing at unlawful hours .....	5	Destroying property, and carrying concealed arms .....	1
Tying horse to a tree .....	1	Disturbing theatrical performance .....	1
Disorderly, and carrying concealed weapon .....	7	Extinguishing street lights .....	1
Profanity, and carrying concealed weapon .....	2	Escaped and recaptured .....	12
Fast driving .....	4	Enticing prostitution .....	1
Professional stealing .....	2	Firing pistol in street .....	1
Obstructing sidewalk .....	1	Profanity, and indecent exposure .....	1
Creating a nuisance .....	7	Carrying concealed arms, and indecent exposure .....	1
Refusing to assist officer .....	1	Total number of offenses .....	1,893
Disorderly, and destroying property .....	4		
Causing dogs to fight .....	1		
Disturbing church .....	4		

*f.—Statistics of most frequent offenders.*

Names.	Color.	Periods of confinement.					Remarks.
		1875.	1876.	1877.	1878.	1879.	
		<i>Days.</i>	<i>Days.</i>	<i>Days.</i>	<i>Days.</i>	<i>Days.</i>	
Mary Nuttrel .....	White .....	330	240	210	285	240	
Teresa Johnson .....	do .....	220	250	240	254	278	
Maria Marino .....	do .....	280	120	90	225	172	
Fannie Belmont .....	do .....	290	90	60	150	311	
Bridget Welsh .....	do .....	230	180	180	357	226	
Julia Banks .....	Colored .....	90	260	150	224	47	X.
Mary Keenan .....	White .....	240	80	150	225	150	
Henrietta Bruce .....	Colored .....	200	90	75	60	.....	X.
Hannah Reeves .....	White .....	150	160	240	60	7	XX.
Mary Welsh .....	do .....	140	220	225	209	187	
Mary Moriarty .....	do .....	130	220	232	201	218	
Jennie Coreoran .....	do .....	100	217	127	330	120	XX.
Agnes White .....	do .....	170	120	223	283	268	
Clara Williams .....	Colored .....	20	240	225	180	187	
Kate White .....	do .....	.....	197	120	165	186	
Mike Lanhady .....	White .....	.....	.....	.....	247	260	
Robert Sherlock .....	do .....	.....	.....	.....	216	165	
Henry Henson .....	Colored .....	.....	.....	.....	250	128	O.
William Streets .....	do .....	.....	.....	.....	315	285	
William McDonald .....	White .....	.....	.....	.....	180	247	
Lewis Perkins .....	Colored .....	.....	.....	.....	270	159	Now in Reform School.
Henry Hayman .....	White .....	.....	.....	.....	150	117	O.
Richard Nolan .....	do .....	.....	.....	.....	225	75	X.
Sam. Matthews .....	Colored .....	.....	.....	.....	187	231	
Jerry Quirk .....	White .....	.....	.....	.....	210	300	
Norman Carter .....	Colored .....	.....	.....	.....	165	120	
S. Robinson .....	do .....	.....	.....	.....	240	90	X.

The mark O is opposite to the names of persons who, after the expiration of their last penal term, have been, and are still, employed with your sanction as unpaid laborers on these premises, and their conduct was so far blameless.

The mark X indicates such parties as, after being for years chronic inmates of the workhouse, have, within the last ten or twelve months, shown signs of seemingly earnest reform, or at least have not been punished within that period, and XX denotes such as have given unmistakable evidence of being redeemed by returning to their homes and families, and remaining, for at least the last eight months, useful and respected members of society.

There are some other ex-prisoners, numbering about half a dozen of either sex, whose names are not mentioned here because they have not been in the workhouse quite as often, who are also engaged in some labor for this asylum, and, with proper means for encouragement, might be probably strengthened in their endeavors for leading a better life, but, without such, not unfrequently slide back into their former bad ways.

Another manifestation of improvement in the discipline is visible in the great decrease in the number of escapes from the workhouse. In the fiscal year 1877, there eloped 108 prisoners; in 1878, 42; in 1879, 38, of whom 12 were recaptured and only 26 are really chargeable.

The practice of retaining some ex-prisoners, upon their request, for unpaid labor in the institution, is considered by some as one of the means to effect their reform; but, to say the least, it is dangerous without resources to encourage them in case of good conduct, by some compensation. Without this, nearly all of these characters relapse sooner or later into their former errors and bad habits, especially the devotees of drink; and in every such instance their example, temptation, and the opportunity for wrong-doing open to them as partial employes, work more mischief and injury to the good order and discipline of the entire institution than the temporary good amounts to which single individuals



may derive from being kept away from the outside world. It is, therefore, necessary to exercise the greatest caution in the selection of the parties allowed to stay, and it seems advisable to fix a small compensation for good services rendered, which is only to be paid after a long trial, during which every offense should be followed by the forfeiture of all reward for previous exertion.

*g.—Hospital and mortality statistics.*

Months.	Patients received.	Infants born.	Cured and discharged.	Died.
1878.				
July .....	35	1	23	11
August .....	22	3	29	1
September .....	35	2	29	3
October .....	42	2	29	7
November .....	27	1	25	7
December .....	28	1	22	2
1879.				
January .....	33	2	24	6
February .....	22	1	16	4
March .....	30	2	30	2
April .....	23	2	27	2
May .....	31	1	40	4
June .....	38	1	26	5
Total .....	366	19	319	54

Present in hospital, July 1, 1878 .....	53
Received since July 1, 1878 .....	366
Born since July 1, 1878 .....	19
Total .....	438
Discharged since July 1, 1878 .....	319
Died since July 1, 1878 .....	54
Total .....	373
Present in hospital, June 30, 1879 .....	65

RECAPITULATION OF DEATHS.

In hospital, from July 1, 1878, to June 30, 1879 .....	54
In almshouse, from July 1, 1878, to June 30, 1879 .....	12
In workhouse, from July 1, 1878, to June 30, 1879 .....	5
Total .....	71

*h.—Comparative mortality.*

Series of fiscal years.	Number of inmates.	Died in almshouse and hospital.	Died in workhouse.
From January 1 to December 31, 1872 .....		202	3
From January 1 to December 31, 1873 .....		250	3
From November 1, 1874, to October 31, 1875 .....		77	3
From November 1, 1875, to October 31, 1876 .....		96	6
From November 1, 1876, to October 31, 1877 .....	258	86	4
From November 1, 1877, to October 31, 1878 .....	284	71	5
From July 1, 1878, to June 30, 1879 .....	312	66	5

In connection with these figures it must be observed, 1. That the very large mortality during the first two years here mentioned was caused by epidemics, and that the number of inmates in those years is not known. 2. That the number of deaths in

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almshouse and hospital includes those patients who were sent by the sanitary authorities directly from the city to the hospital, some of whom arrived there in a dying condition, and many in advanced stages of incurable diseases. But even without reference to this the number of deaths during the last five years shows an annual average of 84, which number, when compared with that of actual deaths last year, viz, 71, shows that the sanitary condition of the institution is much better than ever before, and this conclusion is further substantiated by the fact that the aggregate number of inmates has been steadily on the increase for the last three years.

## i.—Small-pox statistics.

From July 1, 1878, to June 30, 1879:

Admitted .....	1
Discharged (cured).....	1
Remaining .....	0

## k.—Burial statistics and coffins furnished.

Months.	Number of burials.		Number of coffins.	
	In potter's field.	In other cemeteries.	Furnished the Health Office.	Used at the asylum.
1878.				
July .....	54	2	71	10
August .....	41		63	1
September .....	38		43	4
October .....	32		38	7
November .....	40	2	46	7
December .....	42	2	46	2
1879.				
January .....	50	2	52	6
February .....	54		69	7
March .....	60		72	4
April .....	31		45	4
May .....	47	1	50	6
June .....	53	2	71	8
Total .....	543	11	666	69

Five bodies were, with the consent of the authorities, removed by relatives, who furnished coffins themselves, which explains the difference between the number of deaths and that of coffins used in the asylum.

There has not been a single case of "resurrection" effected, or even attempted, within the entire year.

Among the vital statistics also belong the changes in officials and employes during the year, viz, 1 overseer died, 3 resigned, and 4 employes were discharged, and their places were filled again. Also 2 doctors resigned, and 1 doctor and 1 medical student were appointed.

## 2 PROMISCUOUS STATISTICS.

### a.—Crops collected.

	Quantity.
Beets..... bushels .....	42
Carrots ..... do. ....	45
Pease ..... do. ....	30
Onions ..... do. ....	20
Onion sets..... do. ....	5
Parsnips ..... do. ....	25
Tomatoes ..... do. ....	45
Potatoes, white do. ....	30
Turnips ..... do. ....	46
Cabbages, heads.....	1,000
Celery, plants.....	5,000
Fodder, tons.....	3½

Nearly all these products have been used for the diet of the inmates of almshouse and hospital, much to the advantage of their sanitary condition, and to a large saving in the expenditures for their subsistence.

*b.—Articles made up by prisoners.*

On hand.	July 1, 1878.	June 30, 1879.
Pillow-ticks .....	23	20
Pillow-slips .....	44	32
Sheets .....	20	15
Bed-ticks .....	31	70
Bed-spreads .....	3	12
Almshouse shirts .....	50	40
Almshouse drawers .....	17	18
Almshouse coats .....	6	16
Almshouse pants .....	20	10
Workhouse shirts .....	32	45
Workhouse coats .....	53	18
Workhouse pants .....	106	57
Total number of articles on hand .....	405	353

These articles are still on hand after each inmate had been supplied with every article of outfit in beds or clothing necessary for cleanliness, health, and reasonable comfort, and it deserves to be mentioned, that just before the close of the fiscal year, when the male prisoners were removed to the new workhouse, every one of them was supplied with an entirely new suit of prison garments.

*c.—Dry goods not made up.*

On hand.	July 1, 1878.	June 30, 1879.
Calico .....	yards	62
Cotton, men's wear .....	do	150
Cotton, women's wear .....	do	100
Blue domestic .....	do	50
Kentucky jeans .....	do	150
Sheeting .....	do	80
Ticking .....	do	200
Buckles .....	dozen	4
Shirting .....	yards	240
Hickory .....	do	200
Buttons .....	gross	5
Cotton spools .....	dozen	7
Thread .....	pounds	6
Check .....	yards	100
Prison cloth .....	do	750

This stock is kept on hand, partly to be prepared for emergencies of larger demand, which is always largest during the winter months, and partly to keep such inmates as are able to sew, in work, and a supply ready, when such hands are short.

There are still other stores and articles in reserve, as some groceries, shoes, blankets, mattresses, and tools, but the quantity of them is so small, and varies so much by daily issues, that it was considered best not to enumerate them.

The bulk of the crops accounted for in table "a" is small, because the fall crops could not be included in this report at the time when it was rendered.

The small-pox hospital and the potter's field have been kept in good order, but no substantial alterations have been made in either of them since last report.

The inventory of property all over the institution is larger than ever, and will ere long be submitted to you separately, and, therefore, is not embraced here. Only the most important increase, namely, that of the

live stock, by which there are now 6 cows and 2 calves, in place of 3 head last year, and the same number of hogs, viz, 40, though 22 head and 1 cow have been slaughtered and consumed by the inmates during the present fiscal year.

This closes the statistical features of the asylum, but the intendant would fall short in his duty should he pass in silence over the impressions and reflections forced upon him by their arrangement, and over the facilities commanded, and the efforts made by the officials in regard to the moral and intellectual progress of the different classes of its inmates.

The first impression created by the foregoing tables is, that notwithstanding the numerous improvements accomplished during the last two years, the area of the institution is still by far too limited, not only for its best economical success, but, also, and still more, because thereby its means for philanthropic usefulness are by far too much cramped.

An institution of so great a compass and so important a scope should have much more extensive premises, more buildings, and, above all, a liberal endowment, so as to secure, without making philanthropy or reform odious by heavy taxation, its highest degree of utility, and the best talent and zeal in all officials and employes. The real and noblest object of this asylum is to care not only for the physical, but also for the moral and intellectual welfare of the various classes of its inmates, and to treat them not merely as forsaken waifs of society, but as redeemable sufferers from physical or moral disability, and although it has been truthfully stated that their condition has been improved in many regards, it cannot be denied, that much is left to be wished in reference to the means on hand for the latter end.

It has been recommended by you, sir, that Congress would make a large appropriation for the purchase of more farm land, and no doubt much good might be accomplished thereby, particularly if such a tract could join the present grounds, yet the advantage gained would after all be, if any, probably but economical, and still not sufficient to make the institution self-sustaining. The prisoners would have during parts of the year more work, but, without subsequent very heavy additional outlay for the erection of structures, &c., the more deserving paupers and invalids would derive, if at all, little benefit from it.

There is, however, another allusion in your last year's report, which, with due respect to you, sir, the intendant begs leave to consider much easier to accomplish, more practical, and by far more conducive to the most beneficial results in the noblest purposes of the institution, namely, the cession of the United States magazine grounds and buildings to it by Congress. Already the stores and ammunition have been removed therefrom during the last year, and the premises thus evacuated are adapted for but few purposes, and *for none as well or with as great a promise of genuine usefulness as for an addition to this institution*, to which the grounds are contiguous and most welcome as an increase of pasture and arable land, and the buildings with but few alterations and scarcely any expense would furnish most desirable accommodations for many wishes and demands of the more deserving classes of inmates, which in reality would not exceed the actual requirements of our advanced civilization.

By the acquisition of the magazine buildings, of which there are not less than five very large and substantial brick storehouses, besides several brick dwellings and other structures, together with the halls and rooms gained by the removal of the male prisoners and overseers, and to be gained by the prospective removal of the female prisoners from

the main or almshouse building, there would be ample space obtained, and rendered available for the execution of all still desirable improvements, such as a regular chapel, excellent officers' quarters, special wards for contagious diseases, incurable and very aged invalids, and the convalescent, and rooms for instruction and the use of the reformed of either sex—in brief, the internal arrangements of this asylum could be rendered equal, if not superior, to those of any similar institution in the country.

It is true, even these steps of progress could not make this institution entirely self-supporting, but its efficiency and humanitarian standard would be raised, so as to make it an object of pride for the whole city and District.

There are scarcely any measures imaginable to solve the economical problem of its self-support unless by a direct and large endowment, but, perhaps, and probably, *one* might succeed, and this again only by the said donation of the magazine premises, but with provisions and proper legislative enactments of Congress to have them remodeled into a zoological garden, with the available forces of labor and surveillance of this asylum in charge and care thereof. The proximity of these premises to the city, the easy mode of access to them, their long river front and numerous substantial structures, render them admirably adapted and plenty large enough for such a purpose, and, by an admission fee however small, an annual revenue might be realized, not only sufficient for all the current expenses of such an establishment and the entire institution in charge of it, but also a large surplus in excess of it might be created for new acquisitions in animals and other additional improvements, and this hitherto much-neglected section of the national capital might be made attractive by one of the most coveted ornaments of modern large cities, by which soon many other embellishments and conveniences would spring up, and the value of public and private property on the east side of the Capitol would become greatly enhanced.

Turning from existing or plausible facilities and features of economy to the interior policy of management and discipline observed by the officials of the institution and the demeanor of its inmates, the intendant can only repeat his suggestions of previous years as to the necessity of additional legislation in regard to the various length of penal terms, diversity of treatment, and disciplinary punishment, reformatory facilities, and the increase of the number, authority, and compensation of its officers and employés.

By the erection of the new workhouse and its construction with baths, steam cleaning apparatus, cells, and iron bunks, dungeons, and other contrivances, much good has been accomplished, yet its completion by the addition of a south wing for the accommodation of the female prisoners, by which the much-needed total separation of the workhouse from the almshouse will be achieved, and both establishments immensely benefited, is imperatively demanded and most anxiously expected.

The efficiency of the officers and employés attached to this institution, whose functions are always trying and difficult and often dangerous, has been with few and rare exceptions excellent, yet their condition and compensation are by no means what they should be, in view of the heavy responsibility of the duties imposed upon them. Their number is inadequate, and hence their task unduly arduous, and, what is still worse, employés of inferior rank and pay have to perform the same duties as much higher-paid officers. Thus, during the last fiscal year three employés with \$15 per month had to do exactly the same work as overseers

at \$50 per month. This cannot be beneficial for the service, and the intendant has no power to remedy this deplorable circumstance.

Another disadvantage is, that several employés of minor, yet no small, responsibility, such as the superintendent of the sewing-room, of the carpenter-shop for the manufacture of coffins (of which, in the average, about 700 are produced yearly by one man), and others engaged in similar capacity, receive no compensation whatever, on the plea that they once were paupers, which cannot hold good as soon as any such party does full work for any considerable time, and it does great mischief, because it creates dissatisfaction, deteriorates the quality of work, and takes away all stimulus for zeal or even exertion.

The root of all evil in this and other directions is, that the only laws existing and regulating this asylum are of a very remote date, when it had not yet reached its present dimensions and importance, and there are no subsequent rules or regulations from any higher authority than the intendant's discretion, and naturally his directions have neither weight nor stability enough to meet every emergency. Therefore, a new and comprehensive code, defining clearly the rights and privileges, as well as the duties and obligations, of all officers and employés, and of the various classes of inmates, and the mode and different grades of disciplinary penalties, is very much needed. There should be liberal provision made for a sufficient number and adequate compensation of assistants, employés, and physicians for faithful services, the present ones being scarcely in any case large enough to secure the best talent and zeal, without which the institution will never be what it ought to be, namely, an honor to this community, a model of efficiency, a source of blessing for its wards, and a peer to similar establishments in this and other countries.

Moreover, rewards should be authorized for exceptionable services and extraordinary exertions of paupers, ex-paupers, or ex-prisoners, and no means should be spared for the comfort of the worthy aged and infirm, the reform of the fallen and weak, and, in brief, for the perfection of the institution and the fulfillment of its philanthropic scope and social mission.

The intendant does not wish to lengthen this general report by any minute details of his views or respectful suggestions, and therefore he closes his remarks with the acknowledgment of the fidelity and zeal by which his corps of assistants have supported his efforts for the best interests of the institution and its inmates under many unfavorable influences, and, expressing his sincere thanks for them, as well as for your courtesy and encouragement in the discharge of his heavy responsibilities, he signs himself, sir,

Very respectfully,

E. F. M. FAEHTZ.

*Intendant Washington Asylum.*

GEO. A. CASWELL, Esq.,

*Commissioner Washington Asylum.*

#### REPORT OF THE MATRON.

WASHINGTON ASYLUM,

*Washington, D. C., July 1, 1879.*

SIR: I have the honor to report that during the past year the women under my charge, as matron, whether prisoners or paupers, have been,

as usual, employed in sewing, washing, ironing, cleaning, and general house-work; also in nursing and waiting upon the aged and bed-ridden of their own sex, as well as in caring for the young children, among whom were eight colored orphans, three of them boys and five girls.

The school mentioned in my last year's report was continued regularly with some gratifying results. Through the kindness of several friends of the institution the children, 35 in number at that time, enjoyed a very liberal supply of Christmas gifts.

The number of articles made in the sewing-room by prisoners, and in the almshouse by those inmates capable of such work, was as follows:

## FOR THE WORKHOUSE.

Caps .....	22	Shirts .....	768
Pantaloons .....	205	Women's suits .....	24
Coats .....	117		
Total .....			1,136

## FOR THE ALMSHOUSE.

Shirts .....	379	Boys' suits .....	25
Coats .....	62	Dresses .....	152
Pantalons .....	150	Skirts .....	78
Bed-ticks .....	329	Children's skirts .....	23
Pillow-ticks .....	85	Chemises .....	305
Pillow-cases .....	135	Gowns .....	18
Bolster-cases .....	2	Sacques .....	22
Sheets .....	175	Sun-bonnets .....	15
Towels .....	50	Caps .....	30
Drawers .....	180	Overcoats .....	3
Aprons .....	34		
Children's suits .....	35	Total .....	2,287

Also about 2,400 articles were repaired.

Very respectfully,

MRS. A. M. FAEHTZ, *Matron.*

GEO. A. CASWELL, Esq.,  
*Commissioner Washington Asylum.*

## APPENDIX N 2.

## REPORT OF THE VISITING PHYSICIAN.

WASHINGTON ASYLUM HOSPITAL,  
*September 30, 1879.*

SIR: I have the honor to submit the following annual report of the Washington Asylum Hospital for the year ending June 30, 1879:

The number in hospital at the date of last report was 53, including 6 employés. The number admitted during the year was 384. Of these, 101 were white males, 77 white females, 88 colored males, 72 colored females. Forty-six of this number were children under 5 years—white males, 11; white females, 3; colored males, 11; colored females, 21.

Twenty-one women, 6 white and 15 colored, were received in the lying-in wards, and 21 children born. Two of these were still-births.

The number of deaths in the hospital and almshouse was 70. White males, 16; white females, 4; colored males, 29; colored females, 21. Of these, 8 were under 5 years of age—4 colored males, 2 colored females, and 2 white males.

The number remaining in hospital June 30, 1879, was 65, including 6 employés.

Exclusive of those born in the hospital, 65 were born in the District; foreign-born, 76; whilst nearly every State in the Union was represented in the remainder.

An accurate account has been kept of the medicines dispensed in the hospital, alms and workhouse. Total number of prescriptions, 8,700.

The removal of the male prisoners to the new workhouse has necessitated a change in the manner of holding the daily sick-call. The resident physician now visits each floor of the building. There are certain circumstances attending this arrangement which render a return to the former plan desirable, the principal of which is that the hours of sick-call and of cleaning up in the prison fall together. The confusion and inconveniences incident to that process render the duty of the medical officer particularly disagreeable, and no other hour would suit as well, on account of interfering with the labor of the prisoners.

In a sanitary point of view, the occupation of the new workhouse is a great improvement over the former state of affairs. But the male prisoners are as yet the only beneficiaries. They alone have all the advantages the new building affords, in the matter of baths, improved ventilation, &c.

The old building is so constructed that their removal gives but little relief to those who remain in it, and until the female prisoners are removed and the entire premises remodeled for the use of the poor, overcrowding, bad air, and the difficulty of maintaining personal cleanliness among the inmates will remain as now, and serious results, as late events have shown, may happen at any time.

In the latter part of May diphtheria made its appearance among the colored children of the almshouse. Besides its contagious properties, it soon showed an endemic tendency. These children, 19 in number, lived in the upper story of the building, along with 22 colored female paupers, thus crowding a space hardly sufficient for half that number. The disease from the first showed a dangerous, adynamic type, and called for energetic measures to get it under control. It had already invaded two of the rooms on the floor where it originated, and I dreaded lest it should spread to the lower floors, as there were actually no means at my command for isolating cases under the existing circumstances.

The honorable Commissioners promptly responded to my requisition for two hospital tents, into which all the sick children were at once removed. The improvement in their condition was soon manifest. Dangerous nervous prostration gave place to healthy reaction, so that in a week's time nearly all were approaching convalescence. One death had occurred previous to their removal. Total number of cases, 8. The children were kept in the tents for about two months, and returned to their old quarters, which had in the mean time been thoroughly disinfected and cleansed in better condition than before.

I do not doubt but that it would be advisable to use the tents as summer quarters for the children, especially the sick, for the future. They certainly will be available for cases of contagious diseases—measles, scarlet-fever, &c.—that may be sent to the hospital.

The imperfect ventilation and crowded condition of that part of the almshouse (and, as before mentioned, of the whole building), whence these sick children were removed, must take the blame for the very unfavorable conditions which attended the onset of the disease; indeed, for its very origin.

It has been a source of constant wonder to me that such alarming outbreaks have not occurred at any previous time, for favorable conditions



are always present; and now that such outbreak has occurred, it brings to mind the consideration of means of prevention for the future.

These, to be radical, should consist in providing larger and better accommodations for the numbers at present in the almshouse, and also to provide to some extent for the growing wants of such an institution. Twenty-five years ago, the present structure was probably sufficient for the time; but the increase in the population of the District, which has much more than doubled in the last quarter of a century, has increased the pauper element to an equal extent.

A just philanthropy provides for them, the unfortunate ones in the body politic, and it is one of the recognized principles of a broad charity, which finds a place as well in the public as in the individual heart, that they must be cared for with suitable regard to their health and comfort.

This is hardly the case at present. No facilities for bathing, bad ventilation, imperfectly regulated heat, with overcrowding, are some of the evils to which the poor of the District are subject with their present accommodations.

The removal of the female prisoners, with certain alterations in the building, are means that suggest themselves as affording the desired relief. The alterations should be made with the view of securing a more perfect ventilation; furnaces changed so as to give sufficient and more equitable heat, and bath-rooms and water-closets supplied on each floor. Of equal importance are mess rooms, so as to do away with the present unseemly confusion and irregularity incident to a sort of daily scramble on the stairs and in the kitchen, where it is easy to suppose that the stronger and more active are the better helped.

Work-rooms, where all should be required to do such labor as strength or fitness may allow, are important, as giving healthy exercise and affording a means of maintaining a certain amount of discipline, to which all the inmates should be subject.

The hospital department has afforded its fair measure of relief to the sick poor of the District during the past year. The wards have been nearly always full, and the statement, as above, of the number admitted, together with those treated in the alms and work-house, compared with the mortality rate, shows, in the face of many unfavorable conditions, a very gratifying result.

During the past year there has been a notable increase in the surgical practice of the hospital. It gives me pleasure to state that success has been the rule in the operations performed. To this success the close attention given to patients by Dr. Timmins and Mr. Stockstill, the resident medical officers, has greatly contributed. They have given their time, day and night, freely and willingly, and this devotion, joined to an intelligent use of the means modern surgical science places at our disposal in the management of such cases, has insured this happy result.

We are, however, still under the disadvantages complained of in former annual reports—of having no means of classification or separation of patients. That we have so far escaped serious complications, I can only attribute to the zealous and constant watchfulness and care to maintain everything pertaining to the wards, beds, bedding, and other furniture perfectly clean, and the wards themselves regularly white-washed, scrubbed, and thoroughly ventilated.

There are, however, existing evils of prominent interest, to which, at the risk of repetition, I feel compelled to call attention and ask relief. The principal of these is the necessity of performing surgical operations, and treating the cases afterwards in the wards, with all other classes of patients and diseases, and of having convalescents and those able to go about take their meals in the wards.

In the former case there is a risk, which, to the medical mind, is a source of dread and anxiety until the case is out of the way. The physician under such circumstances is always apprehensive—for the danger is always present—of erysipelas, or other form of septic poisoning. The effect upon those who are obliged to be the witnesses of these operations is more or less injurious, and I have reason to believe that unfortunate results, influencing the successful management of cases, have occurred; while the moral effect among the ignorant and generally degraded class who compose the larger number of our inmates has been decidedly bad, deterring others from seeking similar relief, and producing unfavorable impressions as to the humanity and good intentions of the operator.

Of the practice, now in vogue and necessary, of having meals served to all alike in the wards, I have only to say that it is an evil hardly to be appreciated by any one not familiar with life in hospital wards. Habit may deaden to a certain extent the sensibilities of the inmates to the many disagreeable and disgusting experiences of their daily life, but even to the casual observer, it is a natural wonder that food can be taken at all under the circumstances.

Briefly, I must again, as in former annual reports, urge upon the authorities the need of additional wards—a lying-in ward for white women and one similar to that now used by white female patients—so that all classes of cases may have, according to kind, their proper place and treatment. The mess-rooms will then be available for the purpose for which they were originally intended.

Since last report, one case varioloid was received in the small-pox hospital, and was in due time discharged cured.

It has always been my care to keep the grounds attached to the hospital in good order, and to use them as a means of giving employment to such of the inmates as are able to be out of doors. Hence a garden has been planted the last two years, and we have reason to expect the same plentiful supply of fresh vegetables this year as we had last.

I again suggest the planting of a few shade trees in the hospital grounds.

Respectfully, &c.,

JOHN I. DYER, M. D.,

*Visiting Physician Washington Asylum.*

GEORGE A. CASWELL, Esq.,

*Commissioner Washington Asylum.*

*Mortality statistics.*

Cause of death.	No.	Cause of death.	No.
Atelectasis pulmonum .....	1	Inanition .....	2
Bronchitis, capillary .....	2	Laryngitis, lypetitic .....	1
Bronchitis, chronic .....	3	Marasmus .....	1
Carcinoma uteri .....	2	Meningitis, tubercular .....	1
Cancer of stomach .....	2	Paraplegia .....	1
Cirrhosis of liver .....	1	Peritonitis, chronic .....	8
Congestion of brain .....	1	Phthisis pulmonalis .....	3
Congestion of lungs .....	1	Pneumonia .....	18
Diarrhoea, acute .....	2	Senile debility .....	3
Diarrhoea, chronic .....	1	Syphilis, tertiary .....	1
Diphtheria .....	1	Syphilis, congenital .....	1
Dysentery, chronic .....	1	Scrofula .....	4
Erysipelas .....	1	Typhoid fever .....	3
Eclampsia, puerperal .....	1	Valvular disease of heart .....	
Hæmoptisis .....	1		
Hepatitis, chronic .....	1	Total .....	70

## APPENDIX N 3.

## REPORT OF THE INDUSTRIAL HOME SCHOOL.

GEORGETOWN, D. C., *October 31, 1879.*

GENTLEMEN: We have the honor to submit herewith the fifteenth annual report of the Industrial Home School of the District of Columbia for the year ending October 31, 1879, with accompanying documents, viz: Report of superintendent at home, L. Barnes; report of foreman in shop, A. Remy; report of treasurer, M. V. Buckley.

We have had a year of unusual encouragement, prosperity, and success. The industrial feature has gained ground and recognition from prominent educators, many of whom have visited the school during the year. The public school board have established a school at the home, which relieves us from sending the children out to school and is advantageous in many ways.

The District Commissioners have authorized the building of a commodious, handsome workshop and school-room, and the different industries recommended by our committee on industrial training will be inaugurated when the building is completed.

Miss Corson visited the institution recently and gave a first lesson to the children in cooking. Boys and girls were alike interested, and we hope at no distant day to have cooking taught at the home systematically and scientifically. We have provided homes and sustenance for years to these children, but have never taught the industries as thoroughly as they should be taught, owing to our extremely limited means; but we do congratulate ourselves on the good accomplished. During the past year six of the boys and girls have returned from distant points to visit us, all grown and doing well, and thankful to the managers of the home for giving them the right start in life. The building occupied as a residence is old, inconvenient, and dilapidated, and unfit for a dwelling. \*We hope to erect at least one cottage the coming year, and devote the whole of the old building to industrial pursuits.

In addition to what is already taught, we expect to introduce shoe-making, painting, pottery-work, and gardening, and to have it all done so thoroughly that when our children go out in the world to start for themselves they will be accomplished mechanics, able to take rank with the best workmen and to command the largest prices.

We, therefore, renew our application for \$25,000 to provide suitable tools, machinery, and material; also, for the erection, under your direction, of a suitable dwelling.

Thanking you for the recognition and encouragement shown our efforts in the past, we hope for better things in the future.

By order of the board of managers of the Industrial Home School of the District of Columbia.

C. M. MATTHEWS,  
*President.*

HULDAH W. BLACKFORD,  
*Secretary.*

Hon. COMMISSIONERS OF THE DISTRICT.

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REPORT OF INDUSTRIAL HOME SCHOOL SHOP FROM OCTOBER 29, 1878,  
TO OCTOBER 31, 1879.

Articles manufactured: 3,827 tree boxes; 51,000 tree stakes; the usual amount of miscellaneous jobbing, such as caning chairs, repairs at the home, making tables, builder's brackets, &c.

Tools on hand: One steam engine and boiler, one mortising-machine, two scroll-saws, two turning-lathes, one turning-machine, one power rip-saw, one molding-machine, five cutters, two work benches, two grind-stones, and an assortment of tools.

No new machinery has been added since last report.

Whole number of days' work done by boys, 1,120.

A. REMY,  
Superintendent of Shop.

*Disbursements since last annual report, October 28, 1878, to July 1, 1879.*

1878.			
Nov. 4.	James L. Davis, rent for shop three months.....	\$63 00	
21.	Buckey & Co., groceries for October.....	57 03	
	A. Remy, four weeks' wages.....	48 00	
	Memmert & Korff, stoves and repairs.....	17 15	
25.	Thomas Metz, 100 pounds coffee.....	20 00	
	Advertising in Star, and sundries.....	10 65	
30.	L. Barnes, salaries, two months.....	124 00	
	William Reynolds.....	41 35	
	J. F. Birch, coffin.....	9 00	
	J. Nock, crockery.....	5 05	
	Frank Rawlings, insurance.....	12 50	
	Thomas W. Smith, lumber.....	680 86	
	Henry Miltenberger, lumber.....	109 70	
Dec. 17.	John Wills, bread.....	34 72	
	Buckey & Co., groceries.....	75 41	
	Apples, potatoes, poultry, &c.....	15 00	
1879.			
Jan. 13.	Willie Reynolds, board.....	27 00	
	John Lynch, blacksmithing.....	2 30	
	A Hurdle, plumbing.....	4 20	
	L. Barnes, salary.....	62 00	
	A. Remy, four weeks' wages.....	48 00	
	John Wills, bread.....	41 51	
	Buckey & Co., groceries.....	67 47	
23.	James L. Davis, four months' shop rent.....	84 00	
Feb. 7.	Henry Miltenberger, lumber.....	195 37	
	Joseph Weaver, meat.....	123 30	
	S. Thomas Brown, dry goods.....	215 45	
	B. Nordlinger, shoes.....	101 30	
	Mayfield & Heiston, coal.....	131 30	
	W. Nordlinger, clothing.....	19 50	
	Jacob Kengla, wood.....	40 00	
	Buckey & Marbury, hardware.....	23 23	
	Buckey & Co., groceries.....	74 55	
	D. B. Jackson, cow feed.....	14 05	
	John Wills, bread.....	35 82	
	A. Remy, eight weeks' wages.....	96 00	
	Dr. A. B. Shekell's professional services.....	10 00	
Mar. 7.	L. Barnes, salaries.....	62 00	
	Charles Viers, wood.....	20 00	
	A Remy, four weeks' wages.....	48 00	
	John Wills, bread.....	33 66	
	J. Nock, crockery.....	6 50	
	J. Ramsburg, buckskin.....	2 50	
14.	Buckey & Co., groceries.....	56 83	
Apr. 7.	L. Barnes, salary.....	62 00	
	A. Remy, four weeks' wages.....	48 00	
	Joseph Weaver, meat.....	65 07	
	John Wills, bread.....	37 20	
	Buckey & Co., groceries.....	64 70	
	D. B. Jackson, cow feed.....	11 01	
10.	James L. Davis, two months' shop rent.....	42 00	
	Memmert & Korff, stoves and repairs.....	16 40	
	John Lynch, horseshoeing.....	4 50	
	A. Hurdle, plumbing.....	3 00	

# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 357

1878.		
Apr. 10.	J. Nock, crockery.....	\$3 25
	Brown & Lewis, dry goods.....	100 00
May 5.	L. Barnes, salary.....	62 00
	A. Remy, four weeks' wages.....	48 00
	John Wills, bread.....	41 88
	Buckey & Marbury, hardware.....	40 84
	Thomas W. Smith, lumber.....	100 00
	Henry Miltenberger, lumber.....	150 00
8.	Buckey & Co., groceries.....	68 19
13.	William Reynolds.....	45 00
June 7.	L. Barnes, salary.....	62 00
	A. Remy, four weeks' wages.....	48 00
	Joseph Weaver, meat.....	82 00
	John Wills, bread.....	42 24
	Buckey & Co., groceries.....	86 20
	J. Coon, curtains, &c.....	5 25
	J. & J. E. Libby, lumber.....	1 25
	Sundries for home.....	3 75
Total.....		4,401 99

## *Treasurer's report of receipts for Industrial Home School since November 15, 1878, to the 1st of July, 1879.*

Nov. 15.	Balance in bank.....	\$271 94
Dec. 2.	Cash for tree boxes and stakes.....	435 00
	Maintenance.....	130 20
12.	Maintenance.....	126 00
1879.		
Jan. 3.	Duplicate checks.....	847 20
	Maintenance.....	130 20
	Appropriation from United States.....	2,000 00
	Maintenance.....	130 20
Mar. 12.	Maintenance.....	117 60
	Tree boxes.....	100 00
Apr. 8.	Maintenance.....	130 00
	Tree boxes and stakes.....	275 20
May 3.	Tree boxes and stakes.....	355 00
	Maintenance.....	126 00
June 7.	Tree boxes and stakes.....	367 00
	Maintenance.....	140 20
Total.....		5,681 74

## REPORT OF SUPERINTENDENT AND MATRON OF INDUSTRIAL HOME SCHOOL.

### *To the managers of the Industrial Home School :*

In accordance with the instructions and requirements of the managers of the Industrial Home School of the District of Columbia, we herewith submit the following report :

The whole number of children cared for in the home since the date of the last report is 70, 46 boys and 24 girls; discharged to parents and friends, 6, 4 boys and 2 girls; found places for 5, 3 girls and 2 boys; making the total number at the present time, 59.

We have the satisfaction of recording the years just past as one of general good health among the children, but a poor one for our visiting physician, as his visits have been few and far between.

From 10 to 15 of the older boys have worked in the shop on Saturdays and during the school vacation, while the others have been em-

ployed about the house and garden in such work as they were able to perform, and have done their own room-work, making beds, sweeping, cleaning, and several have been taught sewing, proving themselves very capable of helping, at least in the repairing of their own clothing.

The girls are employed about the house, taking their turns in the different branches of household work, and some of the older ones have made splendid progress in needle-work, and do themselves great credit. Each evening in the week the children are all assembled in the school-room and the time spent in singing or reading some interesting book, or familiar talks or advice given that will be of benefit to them in after-life, and I am gratified to state that this part of their daily exercises seems to be very much appreciated.

On last Christmas day the children were supplied with a bountiful dinner, consisting of turkey, chicken, and other delicacies, which they enjoyed very much, and a few days after the ladies of Saint Alban's church also furnished them with a similar dinner, all of which was highly appreciated.

The garden has yielded a fair proportion of vegetables, when we take into consideration the extreme dry weather in midsummer, and the following amount has been raised and partly consumed, viz: 1,000 head of cabbage, 10 bushels of peas, about 75 bushels of potatoes, 3 bushels of string-beans, 100 dozen of green corn, 2 bushels of onions, 20 bushels of tomatoes, about 25 bushels of beets, 25 bushels of turnips, with a supply of carrots, parsnips, &c., in ground. The amount of ground we have to cultivate is altogether too small to raise vegetables enough to supply so large a family the entire year.

On the 12th of August the boys, under my direction, commenced excavating for a swimming-bath, to be used for both boys and girls in learning to swim; and this enterprise, inaugurated through the kindness of Mr. Curtis, of Georgetown, will long be remembered by the children as one of their greatest delights; and in his honor, I believe, they have named it the "Curtis bath."

In the commencement of this work the boys took hold with a will, but before two days had passed many a little palm was held up with the exclamation "See how my hands are blistered!"

After five days' work with the boys, the ground being so hard, it was thought best to employ other help, and application was made to the Commissioners for help from the workhouse, and 10 men were sent over who worked five days to complete the job.

Since its completion the boys have been in swimming three or four times, and it is useless for me to try to describe the pleasure depicted on their countenances.

The following statistics will give the work of the house under the direction of the matron and seamstress, with the help of the larger girls, showing the number of articles made and the number of yards of material in its making: 111 pairs pants, 70 coats, 74 dresses, 74 pairs drawers, 76 shirts, 9 chemise, 12 cloaks, 4 skirts, 23 underbodies, 17 towels, 24 sheets, 18 pillow-cases, 17 bed-ticks, 7 pillow-ticks, 8 night-dresses; consuming 348 yards dress-goods, 321 yards woolen goods, 510 yards factory cloth, 274 yards drilling, 35 yards Canton flannel, 91 yards cotton goods for boys' wear, 135 pairs of stockings, 1 piece bed-tick, 1 piece flannel, 1 piece paper muslin, and 17 dozen spools cotton, besides smaller articles of pins, needles, buttons, &c. This, of course, does not include any of the patching and mending of articles of every-day wear, which has been enormous, as the wear and tear of clothing is much greater when children run and play out than when more closely confined.

Thanks to the ever-vigilant and watchful care of the managers, and with the assistance of the Commissioners of the District, the dilapidated and unsafe condition of the east end of the building has been removed and the danger past, and instead thereof there looms up, yet in an unfinished state, a plain and substantial structure, to be occupied as a school-room and workshop, as well as laundry and for other purposes, and when this building is completed we shall be relieved from the crowded conditions we are now in. I cannot but express my heartfelt thanks for this all-important part of the improvement—the workshop—for the longer I stay and the more experience I have in children of this class, the more convinced I am that to make honest men and women out of unfortunates who are taken out of the street requires constant and unremitting care and watchfulness, and that one mile of travel through the streets of the city, by coming in contact with improper persons, may, and often does, undo the work of many hours, and perhaps weeks, of good that may have been done, and all this will, in a measure, be obviated by their being constantly under the eye and care of those having them in charge.

Believing that all institutions of this kind should be carried on under the industrial system, we shall endeavor, as near as possible, to carry out the wishes of the managers, and hope in the near future to see all of the boys instructed (in addition to mechanical trades) in the art of gardening, fruit culture and propagation, and also how to adapt and prepare soils to plants and fruits; how to plant, bud, graft, and cultivate all useful fruits and vegetables, as well as flowers. Not only would it be a pleasure but profit.

We are year by year more and more impressed with the importance of the work that has been intrusted to our care, and many times almost give up in despair. The difficulty of taking children from miserable homes, surrounded by every temptation, and training them to good personal habits, giving them an idea of the dignity of labor, and to exert a moral discipline over them, which should fit them to be faithful and efficient in domestic service or in any probable mode of earning a livelihood, is, as has often proved to us, an Herculean task. In certain cases we could tell of moral and mental improvement beyond our hopes, yet in many others the good seed we are trying to sow does not take root, or, if so, in soil too poor to thrive, and then our efforts for the time seem entirely thrown away, until some bright spot appears and we are again encouraged to renewed efforts, and still hope that by our precept and example, through the assistance of Him who is ever watching over us, so to conduct ourselves that we may be instrumental in training the poor unfortunate waifs to a life of usefulness here on earth, and also an inheritance in heaven.

Appended hereunto will be found a list of the names of children belonging to the home, with age and parentage of each.

L. BARNES, *Superintendent.*

MRS. R. BARNES, *Matron.*

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Name.	Age.	Parentage.	Name.	Age.	Parentage.
Charles Armstrong .....	13	Father.	Alfred Mortimer .....	8	Mother.
Willie Anderson .....	10	Do.	John Nokes .....	9	Do.
James Bateman .....	9	Father and mother.	James Nokes .....	6	Do.
Andrew Burga .....	10	With his mother.	Will. Osnell .....	10	Father.
George Burga .....	6	Do.	Ellie Ofmann .....	8	Do.
Eddie Bateman .....	6	Father and mother.	Will. Reynolds .....	9	Mother.
Harry Brown .....		Home to friends.	George Vin Seiver .....	15	Orphan.
John Carrol .....	15	Mother.	George Wagner .....		Orphan.
Thomas Carrol .....	10	Do.	Charles Wilson .....	11	place.
Charles Carrol .....	8	Father and mother.	Walter Walker .....	12	Mother.
John Clarke .....		Found a place.	Levi Pennifield .....	10	Do.
John Carrol .....	6	Father and mother.	George Sanford .....	12	Do.
Will. Conley .....	11	Mother.	Lottie Angel .....	14	Place.
Frank Cook .....	12	Do.	Lilly Anderson .....	7	Father.
Will. Dooley .....	11	Do.	Jennie Brightwell .....	12	Mother.
John Davis .....	11	Father.	Mary Brightwell .....	10	Do.
Leonard Davis .....	9	Do.	Mary Bateman .....	8	Do.
Randolph Ellis .....	12	With his mother.	Jennie Conley .....	11	Place.
Harry Eskridge .....	11	Mother.	Mary Clark .....	12	Mother.
Will. T. Frazier .....	12	Father and mother.	Georgianna Eskridge .....	14	Do.
James Frazier .....	10	Do.	Abie Eskridge .....	9	Do.
August Frazier .....	8	Do.	Carrie V. Hill .....	15	Father.
Arnold Grimes .....	14	Mother.	Kate Maddox .....	8	Mother.
William Gingles .....	11	Father.	Eddie Maddox .....	6	Do.
Charles Gingles .....	10	Do.	Mary Kolbrunner .....	9	With her mother.
Walter Hill .....	13	Do.	Louisa Kolbrunner .....	7	Do.
Will. Kearney .....	13	Father and mother.	Fanny Kearney .....	7	Father and mother.
Ed. Kearney .....	10	Do.	Rose Mortimer .....	10	Mother.
Harry Kearney .....	9	Do.	Reburta Mortimer .....	6	Do.
Walter Mahew .....	12	Mother.	Jennie Osnell .....	9	Father.
Alex. Mackey .....	11	Father and mother.	Lilly Osnell .....	6	Father and mother.
			Georgianna Osnell .....	6	Father.
			Ida Walker .....	7	Mother.
			Ella Walker .....	4	Do.
			Henrietta Sanford .....	11	Do.

## APPENDIX N 4.

### REPORT OF THE BOARD OF MANAGERS OF THE PROVIDENT AID SOCIETY FOR THE YEAR ENDING NOVEMBER 1, 1879.

This society was organized at Willard's Hall on the evening of January 9, 1879, pursuant to a call for a public meeting for that purpose by the officers of the Labor Exchange.

At this meeting the District of Columbia was, by virtue of a resolution, divided into six subdivisions, and numbered as follows, viz:

No. 1. Georgetown.

No. 2. The county outside of the limits of the cities of Washington and Georgetown.

No. 3. That part of the city lying between Georgetown and Fifteenth street, northwest.

No. 4. That part of the city lying between Fifteenth street and the Capitol.

No. 5. All that part of the city lying east of the Capitol.

No. 6. All that part of the city heretofore known as the Island.

Charles Bradley, esq., was elected treasurer, and two persons for each of the subdivisions above mentioned were elected to constitute a board of managers, as follows, viz:

For the first subdivision, M. V. Buckley and R. P. Jackson.

For the second subdivision, L. S. Emery and S. M. Golden.

For the third subdivision, William Dickson and R. C. Fox.



For the fourth subdivision, John T. Given and A. S. Pratt.

For the fifth subdivision, Horatio Browning and Thomas Somerville.

For the sixth subdivision, George White and C. B. Church.

In the fifth subdivision Mr. Somerville declined to serve, and W. E. Hutchinson, esq., was selected by the board to fill the vacancy.

In the sixth subdivision Mr. Church declined to serve and Rev. L. M. Gardner was selected by the board to fill the vacancy.

The board met on the evening of the 10th of January, and elected Horatio Browning as president and L. S. Emery as secretary.

The managers adopted such rules as were necessary to enable them to act in concert and systematically.

The following amounts have been turned over to the board for disbursement, as shown by the treasurer's report :

From the Commissioners of the District .....	\$8,600 00
From committees having charge of entertainments, from churches and private contributions, a table of which, as furnished by the treasurer, is herewith submitted.....	633 06
Making a total of.....	9,233 06

*Amounts deposited with treasurer of Provident Aid Society.*

1879.			
Jan. 15.	By H. King, Browning .....	\$25 00	
	Cash .....	1 00	
	A. M. Bruen, New York Avenue Church .....	100 00	
16.	M. S. K. Eaton .....	5 00	
	S. L. Phelps .....	25 00	
	Commissioners District Columbia .....	2,500 00	
17.	Mrs. E. S. Grimes .....	25 00	
	Willet & Libby .....	25 00	
18.	J. W. Easby .....	10 00	
20.	Mrs. A. E. Perry .....	5 00	
	L. Clark: Boston .....	5 00	
21.	H. Lindsley .....	20 00	
22.	Mr. Pratt .....	1 00	
	W. W. Campbell .....	20 00	
23.	W. Lord .....	5 00	
24.	Josiah Dent .....	25 00	
25.	Rev. A. H. Ames .....	5 00	
	W. B. Reed, chairman, from Congregational Church .....	193 64	
31.	Cash, Pratt .....	1 00	
	Mount Zion M. E. Church .....	5 92	
Feb. 3.	Cash .....	2 00	
	Mr. Rohrer, New York Avenue Church .....	2 00	
	Dr. P. Parker, New York Avenue Church .....	10 00	
4.	Rev. J. R. Paxton, New York Avenue Church .....	20 00	
	Governor Wells, New York Avenue Church .....	10 00	
5.	W. Burris .....	5 00	
	E. M. Gallaudet .....	20 00	
12.	Miss Lindsley .....	5 00	
13.	Rev. M. Noble, Sixth Presbyterian Church .....	5 50	
	Commissioners District Columbia .....	500 00	
	Commissioners District Columbia .....	2,000 00	
15.	N. Theaker, by Pratt .....	1 00	
	C. B. Jewell, New York Avenue Church .....	10 00	
	Concert Odd Fellows' Hall, Navy-yard .....	40 00	
24.	Commissioners District Columbia .....	3,000 00	
May 14.	Commissioners District Columbia .....	600 00	

The disbursements of the society have been under the immediate supervision of the board of managers, and for aid rendered in the subdivisions as follows :

In the first subdivision .....	\$1,279 98
In the second subdivision .....	1,440 36
In the third subdivision .....	1,398 78

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In the fourth subdivision .....	\$1,508 15
In the fifth subdivision .....	1,415 87
In the sixth subdivision .....	1,536 96
For printing blanks, &c. ....	35 10
Total amount disbursed .....	8,615 20

One hundred and eighty-three vouchers are herewith submitted accounting for the disbursement of \$8,600, the amount received from the Commissioners of the District.

The members of the board of managers have availed themselves of every opportunity afforded them for information which would enable them to dispense charity with proper discrimination to the real sufferers, without regard to creed or nationality, and they have endeavored to do so with prudence and economy.

They have, to the utmost of their ability, discouraged idleness and indiscriminate alms-giving.

They recognize and acknowledge with thanks the valuable assistance rendered by the police and by many philanthropic ladies and gentlemen who have contributed valuable assistance in searching out the real destitute of the District.

We have expended no money for office-rent or for clerical service, but have devoted all to the relief of the distressed, for such things as in our judgment were most needed.

Respectfully submitted,

H. BROWNING,  
*President.*  
L. S. EMERY,  
*Secretary.*

## 9.—ESTIMATES OF ENGINEERS IN CHARGE OF WASHINGTON AQUEDUCT AND THE BRIDGES OF THE DISTRICT.

OFFICE OF THE CHIEF OF ENGINEERS,  
*Washington, D. C., September 27, 1879.*

SIR: In compliance with the request contained in your letter of the 25th instant (No. 10700) addressed to Lieut. Col. T. L. Casey, Corps of Engineers, I beg leave to transmit herewith a letter from that officer, dated September 25, 1879, containing estimates for the bridges in his charge for the fiscal year ending June 30, 1881, and also estimates for the Washington Aqueduct for the fiscal year ending June 30, 1881.

Very respectfully, your obedient servant,

JOHN G. PARKE,  
*Acting Chief of Engineers.*

Hon. S. L. PHELPS,  
*President Board of Commissioners  
of the District of Columbia.*

OFFICE OF PUBLIC BUILDINGS AND GROUNDS  
AND WASHINGTON AQUEDUCT,  
*Washington, D. C., September 25, 1879.*

GENERAL: I have the honor to inclose herewith a communication from the Commissioners of the District of Columbia, dated September 9, 1879, and numbered by them 10700.

# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 363

The estimates made for the bridges in my charge for the fiscal year ending June 30, 1881, were as follows :

## Care and repair of bridges :

Ordinary care of Benning's, Anacostia, and Chain bridges, including fuel, oil, lamps, matches, &c.....	\$1,500 00
For replanking and painting Anacostia bridge.....	4,000 00
Total .....	5,500 00

The estimates made for the Washington Aqueduct for the fiscal year ending June 30, 1881, were as follows :

## Washington Aqueduct :

For engineering, maintenance, and general repairs.....	\$20,000 00
For commencing the construction of the dam at Great Falls, across the Virginia channel of the Potomac.....	50,000 00
For improving grounds around gatekeeper's dwelling at the receiving reservoir .....	1,000 00
For building wooden fence around the government land at the receiving reservoir .....	7,000 00
For soiling, sodding, and grading the embankment, and excavating slopes of the distributing reservoir and conduit .....	15,000 00
For building a wrought-iron truss-bridge over the waste-channel of the receiving reservoir .....	11,000 00
For building an over-fall over the connecting conduit for the waste-channel of the receiving reservoir .....	2,000 00
For continuing the macadamizing of the conduit road .....	10,000 00
Total .....	116,000 00

Very respectfully, your obedient servant,

THOS. LINCOLN CASEY,  
*Lieutenant-Colonel of Engineers.*

Lieut. Col. J. G. PARKE,  
*Brevet Major-General, Acting Chief of Engineers.*

## P.—REPORT OF OPERATIONS OF THE ENGINEER DEPARTMENT.

UNDER THE DIRECTION OF MAJ. WILLIAM J. TWINING, CORPS OF ENGINEERS,  
U. S. A., COMMISSIONER OF THE DISTRICT OF COLUMBIA.

A.—REPORT OF LIEUT. R. L. HOXIE, CORPS OF ENGINEERS, U. S. A., ASSISTANT TO ENGINEER COMMISSIONER, DISTRICT OF COLUMBIA.

ENGINEER DEPARTMENT, DISTRICT OF COLUMBIA,  
*Washington, October 10, 1879.*

MAJOR : I have the honor to submit the following report upon certain duties assigned to me by you in the engineer department of District of Columbia.

The revision of the special assessments has been continued in conformity with the act of Congress approved June 19, 1878, and the rules adopted by the Commissioners to govern these revisions, as given in my last annual report.

The benefit of the revision has been extended to the paid-up assessments by a subsequent act of Congress, as follows :

[PUBLIC—No. 32.]

AN ACT fixing the rate of interest upon arrearages of general taxes and assessments for special improvements now due to the District of Columbia, and for a revision of assessments for special improvements and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the rate of interest to be collected of any person owing arrearages of general taxes or assessments for special improvements now due to and the liens for which are held by the District of Columbia shall be six per centum per annum in lieu of the rates and penalties now fixed by law: *Provided,* This provision shall apply only to taxes and assessments paid on or before the first day of October, eighteen hundred and seventy-nine.

SEC. 2. Where property has been sold under tax sales and bought in by any other party than the District of Columbia, or where any third person has acquired tax-lien certificates or special assessment certificates, the parties owning the property thus sold or on which such certificates may have been acquired, may tender to the purchaser or holder of said certificates, on or before the first day of October, eighteen hundred and seventy-nine, the amount due and six per centum interest, which when received, shall be in full of principal, interest, and penalties attached thereto by law.

SEC. 3. That the Commissioners of the District of Columbia are hereby authorized and directed, upon written complaint being made to them within sixty days from the passage of this act, by any person or persons who had, prior to June nineteenth, eighteen hundred and seventy-eight, paid their special improvement taxes prepared under an act of the legislative assembly of said District, of August tenth, eighteen hundred and seventy-one, that their said assessment or assessments were erroneous or excessive, to revise and correct such assessments so complained of; and in case the amount of any such assessment is found to be erroneous or excessive, the Commissioners shall issue to the person entitled to the same a drawback certificate for the amount of such excessive or erroneous charge, which certificate shall be received in payment of all special assessments, and for all general taxes due before the first day of July, eighteen hundred and seventy-seven: *Provided,* That complaints filed under the act of June nineteenth, eighteen hundred and seventy-eight, (paid or unpaid) by a property holder his agent or attorney, need not be refiled under this act.

Approved, June 27, 1879.

The rules for revision have been modified by the Commissioners, as shown in Appendix P 7.

The following statement is in continuation of the tables in my last annual report, and gives the revisions made during the past year:

By whom assessed.	Original assessment.	Revised assessment.	Difference.		Remarks.
			Decrease.	Increase.	
Board of Public Works.					See Appendix P 8.
Commissioners, D. C.					See Appendix P 8.
Net decrease			\$351,804 16		

Amount of drawback certificates issued on account of paid-up assessments, \$442,385.78.

Certain appropriations have been made by Congress, at various times, to cover the proportional part of the cost of improvements chargeable to the United States on account of frontage of United States property on the line of the improvement; this in pursuance of a clearly defined policy of the general government at the time of making these appropriations. An account of these appropriations is given herewith, together with a statement of the proportional part of other assessments for special improvements due from the United States.

The rule of apportionment has been to place the United States in the attitude of the District government with respect to the improvement wherever United States property fronted upon the line. If the United States owned upon both sides of the street or avenue where improved,

the whole cost was charged to the general government. If upon one side only, five-sixths of the cost was charged to the general government, leaving one-sixth, as contemplated by law, to be assessed against the private property adjoining and immediately benefited.

It will be seen that the account as stated, in conformity with the revised assessments, shows that the United States is greatly in arrears after receiving credit for all appropriations.

The cost of the great main sewers could not be assessed in any proportion against adjacent property, but the general fund of the District has paid the whole amount. Congress has now recognized the obligation of the general government to pay one-half the cost of this class of work. This will make the total deficit of the United States on account of the work of improvement since 1871, approximately, \$1,040,152.04.

*Statement of amounts charged to the United States in the revision of the assessments already made.*

Board of public works assessments.....	\$1,121,380 19
Commissioners.....	1,136,162 66
Total.....	2,257,482 85
Add amounts charged to United States in assessments not yet revised, subject to correction.....	1,085,226 10
	3,342,708 95
Add work done, chargeable to United States, not included in above assessments:	
Filling canal.....	\$125,666 64
Stanton Square.....	32,242 98
Twelfth street west, from B to B.....	72,104 50
Botanical Gardens, Third to Maryland avenue.....	15,945 38
	245,959 50
	3,588,668 45

The following appropriations were made by the United States:

June 10, 1872.....	\$192,620 00
June 10, 1872, filling canal.....	68,365 00
January 8, 1873.....	1,241,920 92
March 3, 1873.....	106,533 00
March 3, 1873.....	913,497 26
March 3, 1873.....	1,000,000 00
	3,522,936 18
Excess over all appropriations.....	65,732 27

*Cost of work done on the great main sewers not assessed.*

Slash Run sewer.....	\$240,451 90
Tiber sewer.....	1,259,448 44
Boundary sewer.....	448,938 21
	1,948,838 55

The above statement was prepared under my supervision and is correct.

WM. OSCAR ROOME,  
*Clerk in Charge Revision of Special Assessments.*

WASHINGTON, D. C., October 17, 1879.

With the completion of the revision of the special assessments for improvements made pursuant to the act of Congress "to provide a government for the District of Columbia," approved February 21, 1871, and to the subsequent acts of the District legislature, with the collection of the delinquent tax, and the redemption therewith of the 8 per cent. improve-

ment bonds, of the lien certificates upon delinquent property, and of the drawbacks issued on account of erroneous or excessive assessments, the era of the special-improvement tax and all matters growing out of it will have passed away. The operation of the law has not been always uniform and equitable, and the latitude of executive discretion in administering it has not favored uniformity of application. Yet the measure has been well adapted to the occasion of its adoption, and one more wise and just could hardly have been devised. It provided that a reasonable proportion, not exceeding one-third of the cost thereof, should be assessed against the property adjoining and especially benefited by the work of improvement which the territorial government was created to inaugurate. For similar improvement under the preceding form of government the entire cost was assessed against the adjoining property. Under the temporary commission government, which followed the territorial government, the organic law of the latter, and consequently the same rules of administration, continued in force.

Under the present permanent commission government the United States pays one-half, the general fund of the District one-half, and adjoining property pays nothing. This is the opposite extreme, between which and the corporation method of imposing the whole cost upon adjoining property the law assessing one-third of the cost was the mean. In consulting the wishes of property-owners as to the location of needed improvements, it will be difficult to find any law of natural selection to take the place of this. Under the corporation government the expressed wish of the adjoining owners was a necessary preliminary to the execution of the work and the consequent imposition of the tax. Under the present government the absence of a special tax evokes contending claimants for the benefits of the work of improvement.

Up to the present time the greater part of the work done has been the replacement of the old wood pavement (for which it was decided under the former District government that no special tax should be imposed) and the construction of main sewers, which are for the benefit of the general public.

In extending the lateral sewers and the pavements to new localities but little work has been done, yet the equity of requiring adjoining property to pay a "reasonable proportion" of the cost and the necessity for some such assistance to executive discretion in selecting the localities where work is to be done are recognized in the adoption of the present permit system.

In the absence of any law permitting the assessment of a special tax, property-owners who desire these improvements are required to perform the work at their own expense, under the direction of the proper District officers, the District furnishing the material. By this method the funds available are expended wherever the owners of the adjoining property are willing to contribute a share of the cost, and there can be no just complaint of favoritism. But the system is imperfect, and in some respects objectionable.

Sewers should only be laid by the District government, and the pipe-sewers should be put down more substantially than property-owners are required to lay them. It is doubtful whether any sewer not laid upon a foundation of hydraulic masonry or concrete will long remain at the grade upon which it is laid, and it is more than probable that many of the pipe-sewers will have to be sooner or later relaid in this manner.

When the owner of a piece of property desires to have a sewer extended to his lot, there will often be a long distance intervening between his property and the existing sewer, while the owners of the adjoining

property will decline to co-operate with him, or a majority of them may unite with him and a minority refuse any assistance. In such cases the one or the majority will put down the sewer, the District furnishing the material, and the remainder of the adjoining property-owners will make use of the sewer and profit by the enterprise of their neighbors, but pay no share of the cost.

Should work be undertaken upon a large scale on the principle of this permit work, the inequality of its application to individuals will compel a uniform law similar to that which assessed upon adjoining property a reasonable proportion, not exceeding one-third, of the cost of the work of improvement, and this might well replace the permit system now.

#### SEWERS.

In my last annual report is given the general plan for the improvement of the sewerage of the district. Appropriations have been made for the commencement of work, and in the B street drainage area satisfactory progress has been made and the appropriation will soon be exhausted.

On the Boundary street sewer failing contractors have delayed the work and the progress has not been satisfactory. In the latter case other parties have been placed upon the work, and there is now every indication of its vigorous prosecution.

During the next fiscal year the New York avenue sewer should be completed, the canal outlet dredged to its proper depth, with side embankments raised above freshets and properly protected, and a temporary bulkhead run from the outer extremity of the canal to Easby's Point. The latter will contract the flow of the river and secure the depth of channel at the outlet of the canal which is necessary for the maintenance of the proper depth in the latter. It will, at the same time, with the upstream embankment of the canal, inclose the marshes on this part of the river front, and the latter may be drained to the level of low-tide by the use of drains laid through the embankment, with flood-valves opening outward into the canal and closing against a head of water in the latter.

The Boundary street sewer should be continued to the completion of the 20-foot section, leaving the 13 and 7 foot sections for another season.

Estimates for the foregoing and for the extension of the lateral sewers are here submitted, with estimates for repairs of sewers and other matter.

## Summary statement of operations and estimates.

Number.	Description.	Expenditures.			Liabilities under existing contracts chargeable for the fiscal year ending June 30, 1879.	Estimated expenditures for balance of fiscal year ending June 30, 1880.	Estimates for the fiscal year ending June 30, 1881.	Remarks.
		From July 1, 1878, to June 30, 1879.	From July 1, 1879, to September 30, 1879.	From July 1, 1879, to September 30, 1879.				
1	Engineer department, salaries .....	\$63,716 79	\$1,681 87	.....	.....	\$10,390 98	\$20,010 00	Not included in footing; chargeable to special water fund.
2	Outfitting and expenses .....	5,295 71	413 85	.....	.....	4,303 20	5,000 00	Included in estimate for cleaning lower Tiber sewer.
2	Water department, all expenses (see Appendix) .....	82,686 08	46,879 83	.....	.....	.....	53,918 00	Included in estimate for cleaning lower Tiber sewer.
3	Cleaning and repairing sewers .....	22,773 35	8,225 32	\$750 00	.....	22,357 32	30,000 00	Included in estimate for cleaning lower Tiber sewer.
4	Lateral sewers, construction of .....	13,380 04	494 42	.....	.....	14,605 58	50,000 00	Includes material for permit work, and minor laterals.
5	Boundary street sewer .....	10,246 44	10,246 44	89,753 36	.....	99,981 06	200,000 00	For completing 20-foot section.
6	New York avenue and outlet-sewer .....	27,488 00	19,866 60	17,645 40	.....	.....	45,000 00	For completion.
7	Dredging channel across the flats, completing canal-outlet .....	.....	00	.....	.....	.....	20,000 00	
8	Public hay-scales .....	.....	111 00	.....	.....	80 00	.....	
9	Repairing main Tiber sewer .....	9,629 30	2,903 73	466 97	.....	.....	.....	Sold annually at public auction; revenue last year, \$2,093.17.
10	Dredging James Creek Canal .....	.....	.....	.....	.....	.....	20,000 00	

\* \$20,000 of excessive water-tax refunded.

† Included in item No. 3.



## WATER-SUPPLY.

The laying of the 36-inch main, at the expense of the District, in 1871 relieved an urgent need of more water at the higher levels. Now, while the District is still in debt for that main, the need again appears and is growing rapidly.

Washington and Georgetown are exceptionally fortunate in having facilities for obtaining an unlimited supply of pure, wholesome water for every use that good sense and civilized habits may require. Other cities are not so fortunate, yet all are feeling at this time the pressure of an urgent demand for more.

New York has outgrown the capacity of the Croton Aqueduct, and is reaching out for an additional supply of 10,000,000 gallons per day from the Bronx River, at a cost of \$1,250,000; and not content with this, she is looking to the capture of all the dry-weather flow of the Housatonic, about 100,000,000 gallons per day, and its diversion into the valley of the Croton River. The latter project involves the construction of 30 miles of open canal, 2½ miles of tunnel, and the use of 8 miles more of natural water-course; or 27 miles of canal and a dam 10 feet in height; or 15 miles of canal, and steam-power to lift 100,000,000 gallons per day 106 feet high; in either case, a cost of \$2,500,000 to get the water to the Croton Basin, to be followed by the construction of another Croton Aqueduct. Then three rivers will run through the mains of the city; yet the necessity for the supply is already contemplated.

Boston, on the heels of an expenditure of over \$5,000,000 for additional supply, feels the pressure for more, and Mr. Davis, in his able report as city engineer for last year, announces the impending necessity for additional storage capacity and more distributing mains. Boston is further embarrassed by the necessity for pumping again all the water-supply after it enters the sewers. The sewage is to be discharged into the harbor after being delivered by gravity flow through the collecting sewer to the pumps at Moor's Island, which lift it again to tide-level.

Chicago, pumping from Lake Michigan 55,000,000 gallons of water per day through 8 miles of lake and land tunnel, and distributing it through 430 miles of water-mains, requires at once two additional pumping engines having an united capacity of 30,000,000 gallons per day, and this will hardly be completed before it will be necessary to renew the two oldest engines in use there. Chicago draws from the boundless supply of Lake Michigan at the very border of the city. But the sewers run into the lake, and to get the water pure a tunnel 8 miles long runs out under the lake to a crib-structure which forms the inlet to the tunnel. This is exposed to the dangers of storms and the privation of water by anchor-ice, and even out here the storms along shore drift the influence of the sewage, and the microscopist discovers animalcule in the water supplied from the pumps, which, if they increase and multiply in number and species, may compel the construction of more tunnel under the lake and another crib still more exposed to storms and anchor-ice.

Yet these cities are fortunate compared with many which have not their advantages, and they lead the universal demand for increased water-supply only because of their rapid growth in population, wealth and commercial importance.

Washington and Georgetown are more fortunate than all. The Potomac above Georgetown is a mountain torrent, descending 150 feet in 14 miles over a succession of falls and rapids. The minimum dry-weather flow is a thousand million gallons per day. There is not a remote probability that the water will ever cease to be the pure and ordinarily clear

water of a mountain stream, subject only to the turbidity of freshets and heavy rains. With a thousand million gallons of water to draw from it was only necessary when the problem of water-supply presented itself to furnish a channel for the conveyance of the required amount by gravity over a distance of 18 miles to supply the city of Washington and all of the city of Georgetown except the heights, for which pumps must supplement any method.

Fortunately the solution of the problem was confided to an engineer who discarded the illusions of nearer sources of supply in Rock Creek, or the Eastern Branch, or hydraulic pumping from the Little Falls, and inaugurated the present permanent system of a gravity supply from the Potomac at the Great Falls. In designing the Washington Aqueduct, General Meigs wisely estimated far beyond the requirements of the time in which it was constructed, and now, with the additional work which was contemplated by him at that time, the completion of the dam across the Potomac, the aqueduct will bring to its termination in the distributing reservoir near Georgetown a water-supply more than double the present requirements. The time has arrived when this additional work must be done, and additional area of distributing pipe or conduit be provided, or some repressive system be adopted to control the distribution of the present supply. The condition of the District in this respect, and, as compared with other localities, will be better understood after a study of the following table, which is taken, except the data for Washington and Georgetown, from the report of Mr. Joseph P. Davis, city engineer of Boston.

## Water-works statistics.

City.	Year.	Population.	Daily average consumption, gallons.	Consumption per head, gal.	Number of services.	Consumption per service, gallons.	Total income received for use of water.	Receipts per million gallons consumed.	Receipts per million gallons (income from hydrants omitted).	Receipts per million gallons.	Miles of pipe.	Percentage of pipe 6 inches in diameter and under.	Number of meters.	Consumption per mile of pipe, gallons.	Remarks.
Providence	1877	100,000	2,500,800	56	7,420	337	\$200,039.39	\$219.20	\$184.00	\$184.00	144	62	3,203	17,367	\$30 each for hydrants.
Lowell	1877	50,000	1,631,360	53	4,423	369	96,163.81	161.40	140.30	140.30	54.9	.....	229	29,750	\$20 each for hydrants.
Cambridge	1877	48,000	2,631,730	55	6,956	378	154,843.59	1161.10	134.40	134.40	.....	.....	118	.....	\$11 each for hydrants.
Lynn	1877	32,000	1,101,800	34	3,667	300	63,804.75	1158.60	133.80	133.80	49.6	.....	103	22,213	\$10.000 received for hydrants.
Fall River	1877	43,000	1,173,000	26	2,660	570	56,814.20	132.60	.....	.....	48.4	39	881	24,248	\$20.000 received for hydrants and public buildings.
Boston, Cohasset	1877	280,000	20,673,500	74	46,470	445	948,925.45	1125.75	117.15	117.15	300	53	1,079	68,912	\$18 each for hydrants.
Lawrence	1877	35,000	1,554,000	44	2,443	636	65,112.98	114.80	114.80	114.80	36.8	45	89	42,250	.....
Boston, Cohasset and Mystic Works	1877	390,000	20,650,800	74	65,200	446	1,234,801.77	1116.40	108.90	108.90	472	59	1,264	61,567	\$18 each for hydrants.
Montreal	1877	130,000	8,973,500	69	26,458	564	349,083.67	107.00	.....	.....	120.2	.....	368	69,502	.....
Boston, Mystic Works	1877	110,000	8,386,260	76	18,730	448	285,876.32	193.40	88.20	88.20	172	67	185	48,757	\$18 each for hydrants.
Brockton	1877	485,000	20,342,900	63	54,879	553	1,065,842.14	190.90	90.90	90.90	358.3	65	930	89,692	.....
Cincinnati	1877	280,000	15,345,210	57	20,000	797	461,237.15	79.25	.....	.....	.....	.....	204	.....	.....
Toronto	1877	72,000	3,776,750	77	3,814	1,315	157,345.22	72.20	55.20	55.20	107.5	78	80	53,737	\$36,000 hydrants; \$19,000 other city uses.
Philadelphia	1877	817,000	48,383,000	58	16,800	1,330	1,133,041.16	63.30	63.30	63.30	710	71	350	120,808	No income from hydrants; no income from public buildings, except schools.
Saint Louis	1877	400,000	22,545,443	56	.....	.....	494,629.74	60.60	60.60	60.60	185	.....	.....	.....	No income from hydrants; income from public buildings, \$1,000.
Cleveland	1877	136,000	7,728,920	56	7,760	996	152,704.68	54.20	54.20	54.20	108	64	248	71,546	.....
Detroit	1877	110,200	11,545,120	105	18,754	615	210,288.12	49.90	49.90	49.90	194	.....	9	59,500	.....
Chicago	1877	440,000	52,183,900	119	64,898	803	908,509.64	47.70	47.70	47.70	425	70	1,023	122,786	.....
Columbus	1876	34,000	1,448,300	43	1,440	1,006	24,543.32	46.50	46.50	46.50	36	67	439	24,247	.....
Buffalo	1877	133,000	11,691,500	87	6,380	1,833	189,296.90	144.40	44.40	44.40	53.5	.....	.....	125,040	.....
Rochester	1877	82,000	2,872,800	35	3,955	726	42,227.07	40.30	40.30	40.30	.....	.....	82	35,409	.....
Milwaukee	1877	130,000	6,344,200	53	4,054	1,713	91,277.58	36.00	36.00	36.00	75.4	64	6	92,008	.....
Washington & Georgetown	1878	143,518	24,000,000	166	17,000	1,411	90,000.00	10.27	.....	.....	172	86	2	98,850	Public buildings, reservations, fountains, &c., estimated to consume 2,636,188 gals. per day; two high-service districts supplied by pumping without extra charge.

\* No income from public buildings or hydrants.

† Public buildings charged regular rates.

The alternative of repression, notably by the use of meters to divide the supply equitably, proportioning the cost for each consumer to the quantity consumed, is the first to suggest itself, being in the line of retrenchment. In the experience of all other localities it seems to be the last to be adopted. Mr. Davis says:

Three methods of limiting or preventing waste have been adopted or proposed in various cities.

First. The rigid enforcement of ordinances prescribing the class of fixtures that may be used, and requiring the plumbing of buildings to be done under competent inspectors.

Second. Thorough house to house inspection, to discover faulty fixtures and to detect waste, from whatever source it may arise.

The third method of preventing waste is the application of meters to the service-pipes; or, in other words, the sale of water by meter measurement. The effectiveness of this method is beyond question; but there are many serious objections to its general application, especially in large cities and to old works. It is not worth while at this time to enumerate these objections nor to discuss the manner of overcoming them. Undoubtedly meters can with benefit be used much more extensively than they now are, especially in high-service districts, where the consumption *per capita* is much greater than in other parts of the city.

Mr. Chesbrough, in his report as city engineer of Chicago for 1878, says:

That for all legitimate purposes whatever, in a city like ours, it should require a hog'shead and a quarter of water for each man, woman, and child is not possible, and is simply evidence of enormous waste. How to prevent it has become, in this as well as in other cities, a great and perplexing problem. Everywhere the conviction is gaining strength that nothing but meters can do this within available means. So far as used here they bring a revenue twice as great in proportion as the frontage and other rates for the balance of the water furnished to the city. Yet they are not popular and various objections are made to them, none well grounded, however, against their accuracy or the strict justice of charging according to their registers. Their immediate and universal adoption would cause a serious decline in the total water revenue; but a very few years, however, would restore the revenue and be accompanied by other and lasting benefits.

In this case the consumption has increased from 32.8 gallons *per capita*, with 19.5 inhabitants to each tap, in 1858, to 122.7 gallons *per capita*, with 7.1 inhabitants to each tap, in 1878.

In his report as commissioner of public works for New York, Mr. Campbell recommends similar repressive measures, but urges an immediate additional supply of water, and more for the future.

Clearly, the sale of water by measurement is difficult of enforcement, though the method is absolutely just, and every effort to restrain the use and waste of water will fail unless there be an obstacle almost insuperable to increasing the supply.

In Washington and Georgetown more water *per capita* is consumed than in any other locality in the foregoing table, but there are sufficient reasons for this. The United States Government takes a large proportion of the whole amount, approximately estimated by the Superintendent of Public Buildings and Grounds at 2,626,188 gallons per diem.

Deducting this total from the average daily supply of 24,000,000 gallons, there will remain about 21,373,812 gallons which is used for all municipal as well as domestic purposes.

In Washington, upon nearly every street and avenue, a strip of ground, varying from 14 to 40 feet, between the building-line and the footwalk, is dedicated by law to the use of the owners of private property adjoining, to be ornamented with grass and shrubbery. This parking, as it is called, requires irrigation; so do the many reservations scattered so liberally through the city. It is because Washington was originally laid

out as the capital city of a great country, upon a scale commensurate with its prospective importance.

The alternative of increasing the supply is that to which these conditions point, and the comparative cheapness of any method of doing so which is now proposed, as compared with the cost of similar relief for other cities, is at least an inducement to follow their example.

In the various methods proposed the real difference of opinion is as to the amount of immediate expenditure required. All agree that the dam at the Great Falls must be completed first. This will make the aqueduct available for delivering at its full capacity into the distributing reservoir. From the latter point additional area of distribution-pipe or other conduit is needed, and here the plans diverge.

The following are among the more important considerations which have determined the plan hereinafter recommended.

If iron mains be laid, they should be properly located within the city to form a part of the permanent distribution system, in which each main should be proportioned to its duty.

The large mains, as far as practicable, belong upon high grounds, because they maintain the elevation of the water in equivalent of pressure, and this elevation the water loses rapidly as it flows to consumers through the smaller mains. The line of flow from the large mains is then parallel with the inclination of the ground, or from high to low ground maintains a uniform head of water for consumers at different elevations and avoids all waste in the loss of head.

It is necessary to regulate the distribution of water to different levels of consumption by proportioning the mains to the areas which they supply and the levels at which they deliver. Each main then delivers, without unnecessary loss of head, the quantity required for its own immediate area of supply at the proper elevation, and the quantity transmitted to areas beyond. Such a system is necessarily assisted by stop-valves to balance fluctuations in consumption by different areas.

With a faulty arrangement of distributing-mains, the stop-valves may still effect the same purpose to the extent of preventing any reaction upon the mains delivering at the lower levels from the greater head of water in those delivering at the higher levels, so enabling the greater discharge in the former which is due to a less elevation of delivery.

There is no advantage in any further isolation of the different levels having a common gravity supply; neither is there any advantage in separate lines of conduit from the source of supply, other than the security against total loss of supply in the event of accident to one of the lines of conduit. There is, on the other hand, a great disadvantage in multiplying long parallel lines of conduit, an increase of cost out of all proportion to the small increase of capacity.

Whenever all levels can be reached from the same source of supply the circulation of water should be analogous to the circulation of blood in the human system, by one system of great and small mains properly combined to accomplish the purpose.

So with any plan for re-enforcing a system of mains already laid. A common carrier for all is best, and this should be planned with reference to the wants of the future. It must be located so as to deliver by the shortest lines at those points where existing mains can best be re-enforced, while keeping its own proper position in the system, and stop-valves must be used to enable the absolute control, at each point re-enforced, of the quantity of water and the elevation at which it is delivered.

The "loss of head" which deprives the higher levels of water, while the lower levels may have a superabundance, will readily occur where

small pipes are multiplied or other faulty disposition is made, and must not be confused with an actual scarcity of water. The mere loss of head is waste of mechanical power, which may be restored from natural or artificial sources of power; but when the lower levels consume all the available water-supply, while the higher levels are deprived of their share, it is loss of water as well. This is the case in the District when the existing mains bring in all the water the aqueduct affords and deliver it at the lower levels—more water at the fountain-head is needed.

It is to be observed that a large conduit and large mains are needed for the supply of Washington in order to preserve the proper elevation of the water. There is a sufficient head at the distributing reservoir for a gravity supply, but a liberal conduit capacity is required to maintain it. The head available is far less than that in other large cities where smaller pipes will answer the purpose.

It is also to be remembered that while the average daily supply of water might be carried in pipes of a certain capacity if the water could be delivered at a constant and uniform flow throughout the twenty-four hours, yet this can never be the case in practice; and in certain emergencies the mains of a city may be required to deliver from 50 to 75 per cent. more water than the average flow.

Writing upon this subject, Mr. Fanning says:

The actual consumption of water by the fire department for extinguishment of fires in any city per annum is very insignificant when compared with either the domestic, the irrigation and street sprinkling, or the mechanical supply for the same limit of time, yet it has appeared above that the pipe capacity required for the fire service in the general main of a small city exceeds that required for the whole remaining consumption. If we examine this question still closer, taking a length of 1,200 feet of distribution-pipe in a closely built up section of the city, we find on the 1,200 feet length, say, 40 domestic service-pipes, and consumption of, say, 750 gallons each per day, total of 1,5000 gallons per day. Making due allowance for 50 per cent. increase of flow at certain hours, we have a required delivery capacity of 1.5 cubic feet per minute to cover this whole consumption. On the same 1,200 feet of pipe there are, say, four fire-hydrants. If in case of fire we take from these hydrants only four streams in all, of 20 cubic feet per minute each, we require a delivery capacity of 80 cubic feet per minute. In this case, which is not an uncommon one, the required capacity for the fire service is to that for the remaining service as 80 to 1.5.

If the given pipe, 1,200 feet long, is a 6-inch pipe, supplied at both ends, then the delivery for fire at each end is 40 cubic feet per minute. Referring to the table of frictional head, we find that this quantity requires a velocity of flow of 3,401 feet per second, and consumed head, in friction, at the rate of 8.8 feet per thousand feet.

If the 80 cubic feet per minute must all come from one end of the pipe, then the pipe should be 8 inches in diameter, in which case the velocity will be nearly 4 feet per second, and the head consumed at the rate of 8 feet per thousand feet length.

And Mr. Chesbrough, long after the terrible conflagration at Chicago, writes as follows:

The work of replacing small pipes with larger ones, as will be seen below, was continued to a moderate extent, but should be carried still further. It is very gratifying to know that most of the valuable business portion, as well as several other parts of the city, is so liberally supplied with pipes of ample size for fire purposes, but there are still considerable districts of which this cannot be said. Attention was called to this subject in 1864 and 1866, as well as subsequently, in the published annual reports. The fearful rapidity with which fires sometimes spread makes more apparent than ever the necessity of continuing to replace the 4-inch pipes of which so many were laid in former years, by those of a larger size. In the laying of new pipes the importance of having larger mains has been kept constantly in mind. Hence the apparent inconsistency that will be found in the plans of the distributing system, large mains on some streets connecting only with small ones. But as the department may be allowed to carry out future work, the gaps in the lines of larger pipes should be filled up. This would greatly improve the efficiency of the pipe system for fire protection in several parts of the city.

The following table presents some of the comparative advantages of various methods which have been suggested for bringing in an additional supply of water from the distributing reservoir:

Table showing comparative advantages of the different measures for supplying more water to Washington and Georgetown from the distributing reservoir, assuming the completion of the dam at the Great Falls and that the level of the water in distributing reservoir is kept at 145 feet above city datum, which is mean high tide.

Means of bringing the additional supply from the distributing reservoir.	Length of line.	Number of gallons per diem that can be delivered at 135 feet above tide.	Elevation at which 12,000,000 gallons can be delivered.	Elevation at which 15,000,000 gallons may be delivered.	Elevation at which 50,000,000 gallons can be delivered.	Relative capacity of delivery at any one inclination, in terms of capacity of delivery of a 12-inch iron pipe, the latter being unity.	Weight of iron per running foot.	Weight of lead per joint.	Cost of material and construction.	Remarks.
	<i>Feet.</i>						<i>Pounds.</i>	<i>Pounds.</i>		
Iron main, 30 inches diameter.....	28,000	5,500,000	100.57	76.38	.....	9.86	360	562	\$300,000	Fanning.
Iron main, 36 inches diameter.....	28,000	9,000,000	127.63	118.43	.....	15.57	479	794	308,000	Do.
Iron main, 48 inches diameter.....	28,000	20,000,000	141.25	139.29	84.35	32	725	111	500,000	Do.
*Brick conduit to Tenth street west.	18,000	194,000,000	144.9	144.9	144	243	.....	.....	400,000	These plans require each an additional expenditure for connecting with the city mains. The first plan contemplates no additional reservoir. The second plan will cost about \$25,000 more in order to reach the site for a reservoir and \$70,000 to purchase the ground for the latter. The total cost of the former, without any provision for reservoir, is \$624,000. The total cost of the latter, together with the purchase of land for reservoir, is \$719,000.
*Brick conduit to the site of proposed new reservoir.	21,000	178,000,000	144.9	144.9	144	243	.....	.....	555,000	

\* Kutter.

The price of iron is advancing so rapidly that the foregoing liberal estimates for iron pipe may yet be too low.

Cast iron, as compared with wrought iron, is durable and long-lived. Compared with masonry under ground, cast iron is a perishable commodity. In the distribution system it is not likely to be replaced by any other material. For a supply conduit it is, of course, only presented as a temporary expedient. The difference between the cast-iron pipes and the masonry conduits in capacity of delivery, as compared with their relative cost, is so apparent in the table that attention need hardly be called to it. In the latter case, however, it is to be noted that the prodigious supply brought in reaches points outside the city only. A 4-foot main will bring from these points to the proper place in the distribution system a re-enforcement of 27,000,000 gallons per diem, at an elevation of 137 feet above tide, a less quantity at a higher elevation, or a greater quantity at a lower elevation. The cost will be about \$164,000 additional.

If we take the 36-inch main, we repeat the experience of the District in 1871, and will soon be calling for more, while we are continuing to multiply the number of small independent conduits from the distributing reservoir. We secure a new main in the distribution system, but in a place where it will not be needed when the conduit is built. The 4-foot main is out of the question at the present price of iron. It would cost nearly five-sixths as much as the 9-foot conduit, while their proportional capacity for delivery of water at the same elevation are as 32 to 243. But if the 9-foot conduit is built, the aqueduct is brought to the border of the city.

The cost of building the present 36-inch main, with the estimated cost of the new one proposed, amounts, in round numbers, to \$900,000. When the cost of the next one is added, and it could not be very long deferred, the sum of \$1,300,000 will have been spent for temporary purposes at a great sacrifice—a sum just equal to the estimated cost of the extension of the aqueduct, including the completion of the dam across the Potomac, a new reservoir and gate-house, a roadway over the line of the conduit, and the necessary connections with the city mains, covering the cost of labor and material and land condemnation.

The united capacity of three such lines is to that of the 9-foot conduit—one-third of their united length—as 47 to 243, too great a discrepancy. Clearly, a liberal expenditure now is good economy.

The two methods of extending the conduit are identical up to the termination of the shorter. Each contemplates the extension of the aqueduct substantially as it now exists, and the details of construction at particular points would in either case be determined by further study of working plans. The estimates are practically the same; but the longer line continues about 3,000 feet beyond the other, to a site selected for a new reservoir, which is about as far east as the conduit can be carried.

Against the cost of the 3,000 feet of extra conduit in the one case is to be placed the cost of nearly the same length of additional 4-foot iron main required in the other, leaving a difference of, say, \$25,000 in favor of the shorter line. But a reservoir is to be at the end of the longer line, a part of this extension of the aqueduct, and not only must the end of the conduit be located there, but the ground for the site of the reservoir must be at once condemned and purchased. The cost of this is estimated at about \$70,000. Adding to this the difference against this plan as compared with the line without a reservoir, say \$25,000, the sum paid to secure the reservoir plan is \$95,000. This sum is invested in



real estate which can be kept as a park or sold hereafter should the plan of building the reservoir be abandoned. That the investment, under the circumstances, would be a good one hardly requires a defense of the necessity for additional reservoir capacity.

This is a matter about which there will necessarily be a variety of opinions. The Mississippi River water below the Missouri is drunk unfiltered by many people who have asserted a preference for it in its natural state. The Potomac is rarely in the turbid condition which is chronic with the Missouri. House-filters can be used to make potable water in drinking quantities, and clothes can be washed with blueing in larger doses. Sediment can be flushed from the mains as it accumulates, and the capacity of settling reservoirs may be adapted to any degree of such conditions. But the genius of modern civilization not only calls for more water, but demands it clear and pure.

In his recent work upon water-supply engineering Mr. Fanning says:

A small but favored minority of the American cities have the good fortune to find an abundant supply of water for their domestic purposes within their reach that remains in a desirable state of transparency and limpidity.

The running rivers that are subject to floods bring down all manner of floating debris from the fine meadow grass to huge tree trunks and buildings entire. These are all visible matters that remain upon the surface of the water, and their separation is accomplished by the most simple mechanical devices.

Coarse and fine racks of iron and fine screens of woven copper wire are effectual interceptors of such matters and prevent their entrance into artificial water-conduits.

Next among the visible sediments may be classed the gravelly pebbles, sand, disintegrated rock, and loam, that the eddy motions continually toss up from the channel bottom and the current bears forward.

These are not intercepted by ordinary screens, but are most easily separated from the water by allowing them quickly to deposit themselves, in obedience to the law of gravitation, in a basin where the water can remain quietly at rest for a time.

When the water is received into large storage-reservoirs it is soon relieved of these heavy sedimentary matters by deposition; and a season of quietude, even though but a few hours in duration, is a valuable preparation for succeeding stages of clarification.

Next are more subtle mineral impurities, consisting of most minute particles of sand and finely comminuted clay, which consume a fortnight or more, while the water is at rest in a confining basin, in their leisurely meanderings toward the bed of the basin.

If these mineral grains are to be removed by subsidence for a public water-supply, the subsidence-basin must usually be large enough to hold a *three weeks' supply*, and must be narrow and deep, so the winds will stir up but a comparatively thin surface stratum, and also so the exposed water will not be heated unduly in midsummer.

Next are the organic fragments, including the disintegrating seeds, leaves, and stalks of plants, the legs and trunks of insects and crustacea, and the macerated refuse from the mills.

All these have so nearly the same specific gravity as the water that they remain in suspension until decomposition has removed so much of their volatile natures that the mineral residues can finally gravitate to the bottom.

If these are to be removed by subsidence, the basin must hold several months' supply at least, and be so formed and protected as to neither generate nor receive other impurities.

In addition are the innumerable throngs of living creatures that people the ponds and streams, and their spawn. These cannot be removed by subsidence during their existence, and reproduction maintains always their numbers good.

Modern works for the water-supply of large towns comprise immense areas of subsidence and storage reservoirs, which afford, at the same time, an ample security from privation on account of accident to the line of conduit. This element of security cannot be neglected. In the case of the District it will be important if any of the lines of pipe con-

duit be taken up for use within the city after the extension of the aqueduct.

The present daily supply of Baltimore is 18,000,000 gallons per diem; the new conduit has a capacity of 170,000,000 gallons per diem; and the total available reservoir capacity is 1,698,000,000 gallons, besides a storage reservoir of 1,500,000,000 gallons.

The present daily supply of Washington and Georgetown is about 24,000,000 gallons; the new supply which can be brought as now proposed is 40,000,000 more; the maximum available reservoir capacity is 200,000,000 gallons, covering 95 acres.

There are localities where reservoirs are not required. Mr. Cheshbrough reports briefly concerning those attached to Lake Michigan at Chicago:

*Reservoirs.*—These still stand, but are of no use.

But the District has not the water of the great lakes to draw from. If it were proposed to throw a masonry dam across Rock Creek, just above Oak Hill Cemetery, and create a lake 140 feet in depth for a subsiding reservoir, purchasing mill-rights and land to be submerged, extending Fourteenth street across the lake at a point comparatively shallow, and building a drive around the lake—if this were seriously proposed at present, after mature consideration of the effect of the local storms in Rock Creek and the progress of silting up in the lake from its remote upper extremity toward the dam, then a project on a scale of magnificence at least commensurate with the importance of the capital of a great country would be open to discussion and criticism. I do not submit it for that purpose just now. But the present plan selects an available site for an additional reservoir of small capacity which can be made absolutely safe from accidents; and this should be secured, because the present reservoir capacity is not sufficient for the requirements of modern civilization, failing to keep the water supplied for use from being turbid. It is an evil which has no other remedy, is caused by the increased consumption of water, and will increase with it.

The cost of an increased supply of water, if the United States Government will not assume it, can be paid in accordance with the principle established in the present organic law of the District, one-half by the general government and one-half by the District. If, in addition to this, the United States, as a water-taker, will pay, as in other cities, the usual rates for water consumed in the public buildings, the water-fund will be greatly benefited. There is no reason to the contrary unless it be the fact that the aqueduct was originally constructed at the expense of the United States as far as the distributing reservoir, at a cost of \$3,732,546.72. Applying to this the rule of equal division of cost between the District and the United States, the District is left \$1,866,273.36 in debt. On the other hand, the District has laid 155 miles of pipe in the distribution system, while the United States has laid but 17. The cost of the distribution system laid by the District has probably not been less than \$1,600,000. The district now pays equally with the United States the cost of maintenance of the aqueduct and all expenses incident thereto, while the United States pays nothing on account of the maintenance or extension of the distribution system, nor any part of the expenses of the water department. These expenses are not included in the annual appropriations for the support of the District of Columbia, of which the United States contributes one-half, yet the general government, having property in every part of the District, is equally

interested with all other water-takers in the maintenance and extension of the distributing mains and the support of the water department.

Under the present rule for the division of expenses in the District, which has crystallized from long consideration and many trials on the part of Congress, there appears to be no sufficient reason why the United States should not pay the water-rates with other water-takers.

I present herewith plans and estimates for an additional supply of water for Washington and Georgetown, as presented in February, 1879, except an increase of the estimate for the 4-foot main, on account of the great rise in the price of iron, and with the recommendation that Congress be asked to appropriate not less than \$500,000 for land condemnation, the commencement of the work upon the conduit, and the completion of the dam at Great Falls.

It is proposed to bring in this supply by means of a 9-foot conduit from the distributing reservoir to an available site for another reservoir east of Seventh street west; thence, for the present, by a 4-foot cast-iron main along New Jersey avenue to the principal mains which now radiate from the vicinity of L and G streets to all parts of Washington and to Georgetown. The 12-inch main along Boundary street is also to be connected with this new main.

The accompanying plan and profile give the location of the conduit, reservoir, and 4-foot main.

The line of the conduit is carried close to the northern boundary of the city, and will be provided with outlets for tapping at intervals with other mains, as the future supply may require.

In order to retain the services of the present distributing reservoir, the conduit is made to tap it at the bottom. The shortest practicable line is taken; and, to avoid land condemnation, this follows as much as possible existing streets and county roads.

Rock Creek may be crossed either by a gang of large cast-iron mains laid as siphons through the bed of the creek, or by a tunnel through the compact rock which underlies this stream. If borings in this rock are satisfactory, the latter method is, I believe, the best and cheapest. The former has the advantage of requiring, for the present, only as many mains as are necessary to bring the requisite supply of water, with provision for adding others when needed. It is, however, a perishable construction, while the latter method is, for all practical purposes, eternal.

The line is so located that the conduit rests throughout on the natural ground where not in tunnel, and is protected where covered by embankment by side walls computed to resist independently the entire water pressure.

Assuming that the reference of 145 feet above tide for the water surface of the distributing reservoir is maintained, this conduit will bring to the city at the site of the new reservoir the following quantities of water, in round numbers, per diem, viz:

	Gallons.
At 144 feet above tide .....	48,000,000
At 143 feet above tide .....	69,000,000
At 142.50 feet above tide .....	86,000,000
At 141.25 feet above tide .....	99,000,000
At 140.94 feet above tide .....	111,000,000
At 138.91 feet above tide .....	137,000,000
At 138.88 feet above tide .....	159,000,000
At 134.85 feet above tide .....	178,000,000

The latter quantity is a little beyond the safe limit for constant service, giving a velocity of about 4.3 feet per second, but the conduit will

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duit be taken up for use within the city after the extension of the aqueduct.

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At 138.91 feet above tide .....	137,000,000
At 138.88 feet above tide .....	159,000,000
At 134.85 feet above tide .....	178,000,000

The latter quantity is a little beyond the safe limit for constant service, giving a velocity of about 4.3 feet per second, but the conduit will

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be capable of delivering for a limited time at 122.50 feet above tide 265,000,000 gallons in twenty-four hours, the velocity in this case being 6.45 feet per second.

The amount which may be taken from the distributing reservoir at 145 feet will depend upon the height of the dam to be constructed across the Potomac at Great Falls and the safe limit of head under which the upper conduit may be run. The capacity of the new conduit will, of course, be much greater than that of the present conduit from the Great Falls, on account of greater head available.

I do not think it advisable to disturb the existing system of mains leading from the distributing reservoir and now supplying Washington and Georgetown, at least until the new conduit shall have been for some time in successful operation: and even then it may perhaps be considered advisable to retain them as a reserve source of supply in case of accident to the lower conduit.

Over the whole line of the conduit it is proposed to condemn a roadway 60 feet wide wherever the line leaves existing roads and streets, and this object has been kept in view in selecting the route.

The site selected for a new reservoir is central and gives the greatest storage capacity nearest the city, and at the least expense. The ground for this site should be condemned and purchased at once, together with a 60-foot roadway running south to Boundary street.

The flow line of the reservoir is proposed for a reference of 140 feet—depth of water, 30 feet—giving a storage capacity of, approximately, 235,000,000 gallons.

The following estimates are necessarily approximate, but will cover reasonable contingencies:

*Estimate for the construction of the conduit, reservoir, and 4-foot main.*

DAMAGES.	
Condemnation of land:	
40 acres for reservoir, at \$500.....	\$20,000
24 $\frac{1}{2}$ acres around reservoir, at \$500.....	12,045
5 $\frac{1}{2}$ acres between gate-house and Fourteenth street, at \$500.....	2,750
3 acres between Fourteenth and Nineteenth streets, at \$400.....	1,200
5 acres between Nineteenth street and Rock Creek, at \$300.....	1,500
1 $\frac{1}{2}$ acres between Road and High streets, at \$500.....	850
2 acres between Ridge and Conduit roads, at \$200.....	400
Improved property on conduit.....	3,000
Improved property on reservoir.....	37,000
	<hr/> 78,745
EXCAVATION.	
24,940 cubic yards rock on conduit, at \$6.....	149,640 00
4,930 cubic yards rock on conduit, at \$8.....	39,440 00
1,564 cubic yards rock on conduit, at \$3.....	4,692 00
42,847 cubic yards of earth, at \$3.....	128,541 00
	<hr/> 322,313 00
MASONRY.	
1,225 cubic yards of coursed, at \$5.....	6,125 00
400 cubic yards of coursed, \$5.50.....	2,200 00
6 498,207 brick, including packing, at \$30.....	194,946 21
	<hr/> 203,371 21
EMBANKMENT.	
162,500 cubic yards of earth at reservoir, at 40 cents.....	65,000 00
7,550 square yards of paving for slope, at \$2.25.....	16,987 50
48,300 square feet of lining, at \$1.....	48,300 00
	<hr/> 130,287 50

## EXCAVATION.

1, 138, 900 cubic yards earth at reservoir, at 20 cents ..... 226, 780 00

## TIMBER.

	Feet, b. m.	
4, 380 pieces, 12' x 10" x 10", for conduit .....	438, 000	
26, 136 pieces, 10' x 2" x 12", lagging ....	522, 720	
60 pieces, 15' x 8" x 8", shafts .....	4, 800	
90 pieces, 6' x 8" x 8", shafts .....	2, 880	
396 pieces, 10' x 1" x 12", lining of shaft .....	3, 960	
	<hr/>	
	972, 360, at \$20	19, 447 20

## MAIN.

8, 200 linear feet 4-foot main, 1 $\frac{3}{4}$ ", 725 pounds per foot, 2, 659 tons, at \$16 per foot .....	131, 200 00
Laying 8, 200 linear feet, at \$4 .....	32, 800 00
	<hr/>
	164, 000 00

## GATES.

1 36-inch .....	800 00
1 30-inch .....	600 00
	<hr/>
	1, 400 00

## GATE-HOUSE.

Built of granite and brick, with influent and effluent gates ..... 35, 000 00

## SUMMARY.

Conduit .....	545, 031 41
Mains with gates .....	165, 400 00
Land damages .....	78, 745 00
Work on reservoir .....	357, 067 50
Gate-house .....	35, 000 00
	<hr/>
	1, 195, 196 91
Completion of dam at Great Falls .....	200, 000 00
	<hr/>
	1, 395, 196 91

Contingent expenses are included in the items estimated.

Very respectfully,

R. L. HOXIE,  
*Lieutenant of Engineers, U. S. A.*

Maj. WM. J. TWINING,  
*Corps of Engineers U. S. A.,*  
*Engineer Commissioner, District of Columbia.*

B.—REPORT OF LIEUT. F. V. GREENE, CORPS OF ENGINEERS OF U. S. A.,  
ASSISTANT TO ENGINEER COMMISSIONER OF DISTRICT OF COLUMBIA.

ENGINEER DEPARTMENT,  
DISTRICT OF COLUMBIA,  
*Washington, October 10, 1879.*

MAJOR: I have the honor to submit herewith a report upon the operations of that portion of the engineer department which is under my direction for the fiscal year ending June 30, 1879.

On the 15th of May, 1879, in compliance with the orders of the War Department, I reported to you "for duty as one of the assistants to said Engineer Commissioner, provided for in section 5 of the act approved



June 11, 1878, entitled 'An act providing a permanent form of government for the District of Columbia.' I was immediately assigned to the charge, under your direction, of that portion of the work of the engineer department relating to pavements, street improvements, county roads, sweeping and repairs to streets and alleys, lighting streets, and, generally, all surface work relating to the improvement and care of the streets and roads in the District.

#### PAVEMENTS.

The accompanying map and tabular statement, marked Appendix P 12, show the condition of the carriage-ways within the city limits of Washington and Georgetown on the 1st of July, 1879. This shows that there are—

- 23.6 miles containing 558,880 square yards wood pavement ;
- 36.8 miles containing 935,973 square yards concrete and asphaltum ;
- 13.2 miles containing 333,256 square yards stone-block pavement ;
- 20.3 miles containing 421,849 square yards blue-stone, cobble, and other rough-stone pavements ;
- 7.3 miles containing 187,105 square yards Macadam pavements ;
- 23.3 miles containing 534,366 square yards gravel roadways ;
- 91.6 miles containing 1,904,545 square yards wholly unimproved streets, making a total of 118 miles containing 2,869,490 square yards of improved carriage-ways.

The wooden pavements are what remain of those laid between 1871 and 1874, which aggregated 1,005,231 square yards; they are of various patents and laid in various ways, but with a few exceptions they are now so rotten and broken as to make the streets impassable for ordinary carriages. Under the contracts made during the year 1878-79, of which a list is submitted herewith, marked Appendix P 9, 198,674 square yards of the rotten pavements have been replaced by asphalt or stone. There remain, however, as shown in Appendix P 10, 558,880 square yards.

During the current fiscal year the appropriation for replacement of pavements is \$150,000. At present prices this will be sufficient to replace only about 80,000 square yards, leaving nearly 480,000 square yards on hand at the beginning of next year. At this rate the wooden pavements cannot be replaced in less than seven years.

The importance of providing some means, if possible, to replace these pavements at the rate of not less than 200,000 square yards a year, so as to dispose of them in two or three years at the most, is so well appreciated as to call for no special emphasis here.

The numerous varieties of so-called concrete pavements laid between 1871 and 1875, on various patents of which the essential features were a base of broken stone, a binder of fine broken stone and coal-tar, and a wearing surface of fine gravel or sand mixed with coal-tar, are as a general rule in a fair state of preservation, especially those which were laid or resurfaced in 1875 and 1876. There were about 700,000 square yards of these pavements at the end of the last fiscal year. The appropriation for the current year for "repairs to concrete pavements" is \$100,000, which will be sufficient to repair about 100,000 square yards. A similar appropriation should be made for the next fiscal year.

The trap-block pavements laid by the board of public works are in very fair order, and give durable roadways for the heavy traffic of the locality in which they are situated, although they are not comfortable for carriage-driving.



The rough-stone pavements, granite rubble, sandstone rubble, cobblestone, &c., laid principally by the old corporation, of which there are over 400,000 square yards at present existing, are much complained of by the property-holders and residents along the streets whereon they are situated; but these streets are perfectly passable at all seasons, and are not injurious to health, and they should remain as at present until the rotten wooden pavements are disposed of.

The gravel roadways occur, as a rule, in the suburbs, just within the city limits, and if a slight increase could be made in the appropriation for ordinary repairs to streets and roads, so that these roadways could receive more attention, they would answer all the demands of the localities where they are situated for several years to come.

The macadam pavements on Boundary, T, and Eleventh streets are in very good order; that on Four-and-a-half street, from Missouri avenue to the Arsenal gate is in very bad order. This pavement was originally laid in 1872, and relaid in 1874 and 1875. Experience has proved that it is not equal to the traffic which passes over it, and it should be relaid with a durable stone pavement.

The asphalt pavement on Pennsylvania avenue remains still under charge of the commission by whose direction it was laid, the term of the contractor's guarantee of repairs not yet having expired.

The above represents the present condition of the pavements which existed at the beginning of the last fiscal year. During that year a considerable amount of new pavement has been laid, principally in place of the rotten wood pavement.

The new pavements are of two classes, depending on the locality, viz, asphalt and granite-block. The asphalt pavement has been laid in those localities where the travel is comparatively light and uniformly distributed. The essential features of this pavement are a base 6 inches thick of hydraulic cement concrete, on which the asphaltic mixture is laid in two coats, the total depth being  $2\frac{1}{2}$  inches when compressed. The asphaltic mixture is composed of a cement of refined Trinidad asphalt and petroleum oil, mixed with fine sand and limestone powder, the proportion of asphaltic cement being about 18 per cent., which has been found by experience to be the proper proportion in order to give a pavement not too soft on the one hand nor too dry on the other.

The detailed specifications are submitted herewith; they have been strictly complied with. During the last fiscal year 154,520 yards of this pavement were contracted for, at prices ranging from \$2.04 $\frac{3}{4}$  to \$1.47 per square yard, including removal of old pavement and grading, but exclusive of straightening and resetting old and furnishing new curb, and the relaying of sidewalks incidental thereto, which appear as extra work in the appendix.

The total expenditure for these pavements, including all payments up to this date, amount to \$228,336.38, a portion of the contracts being still incomplete.

The stone-block pavement has been laid in those localities where the travel was exceptionally heavy or where it was not uniformly distributed over the street, but confined in a portion of it by a street-railroad. On one street (Seventh street) this pavement was laid with a base of hydraulic-cement concrete 6 inches thick, but on other streets this was not considered necessary, and the foundation was gravel and sand. The blocks were 7 by 4 inches in average section and 6 inches deep, and in quality equal to the Richmond or Cape Ann granite. The joints were filled with fine gravel and then with hot tar, in order to cement the blocks together and make the pavement water-tight. Owing to the incon-

venience caused to foot-passengers by the tar remaining for some time in a semi-fluid condition, asphaltic cement has been substituted for coal tar in the joints in the pavements more recently laid. The detailed specifications for this class of pavement are submitted herewith; 56,944 square yards of this pavement were laid during the year, at prices varying from \$2.15 to \$1.95 on gravel foundation, and \$2.61 on concrete foundation, per square yard; the total expenditure, including extra work, amounting to \$128,434.44.

A small piece (1,310 square yards) of macadam pavement was laid in Georgetown, at a cost of 69 cents per square yard. There was also laid as an experiment a small piece (1,093 square yards) of pavement of compressed asphaltum blocks. It is less than a year since this was laid, and it is yet too soon to give a definite opinion as to its merits.

All new pavements have been laid according to law, with a guarantee on the part of the contractor to keep them in repair for the period of five years, 10 per cent. of all payments due the contractor being retained by the District to insure a compliance with their guarantee.

#### IMPROVEMENT OF STREETS.

During the past year the following streets were brought to grade, the curb, gutters, and brick footwalks laid and a gravel carriage-way made, viz:

F street between Second and Seventh, northeast, cost .....	\$6,933 03
N street between First and Third, northwest, cost .....	1,597 33
Reservation at Delaware avenue, First and F, northeast, cost .....	902 40
Total .....	9,432 76

During the current fiscal year the appropriation for improving various streets is \$100,000, of which about one-half has been put under contracts for the improvement of the following streets, viz: South Capitol, North Capitol, North M, New Hampshire avenue, Dunbarton, South C, and West Tenth street; the improvement in each case being the grading of the street, laying curbs, gutters, and sidewalks, and a gravel roadway.

From a statement previously made, it will be seen that there are 91 miles of streets which are wholly unimproved, *i. e.*, they are not on the established grade, have no curbs or sidewalks, and generally are impassable. A large portion of them are in the suburbs of the city, beyond the limits of existing houses, and will need no attention for a few years. Others, however, are in the heart of the city and should be improved at once. Prominent among these latter are the streets in the vicinity of the Capitol; such as Canal street, Virginia and Delaware avenues, and C street on the south side, and L street, New York and Delaware avenues, and N street on the north side. In addition to these there are many streets in the southeastern section of the city which were partly improved by the Board of Public Works, but were not finished, and have now for several years been left almost impassable by reason of change of grade; intersecting streets being on different levels from 2 to 6 feet apart. There are also many streets in various sections of the city which are in nearly the same condition, a portion of the street having a width of 50 or even 60 feet between curbs, and another portion 35 feet, the latter being the established width. All of these streets are included in the estimates for improvement, which make up a total of \$586,896.

How much of this work can be taken in hand during the next fiscal

year is a matter depending on the resources of the District and the appropriations which they will warrant. Their improvement is of secondary importance compared to the prime necessity of replacing the rotten wood pavements at the earliest possible date.

#### COUNTY ROADS.

The county roads within the District aggregate a length of about 102 miles, exclusive of a new road known as the "Tunlaw road," about  $1\frac{1}{2}$  miles in length, which has been constructed during the past year. These roads as a general rule are kept in repair by days' labor, under direction of three supervisors, each of whom has a district under his charge. Specific repairs in one locality costing more than \$1,000 are let by contract, as shown in the tabular statement submitted herewith, marked Appendix P 13. The total expenditures during the past year for the county roads amounted to \$26,452.14. For the present fiscal year the appropriation for ordinary repairs to streets, alleys, and county roads, exclusive of salaries of supervisors, is \$75,500, of which it will not be possible to devote more than \$20,000 to the county roads. This will be sufficient for ordinary repairs. But there are certain roads, such as the Seventh-street turnpike and others, which are in such bad condition that they need very extensive work upon them. On Seventh-street road alone not less than \$20,000 will be required to properly repair the macadam.

I also invite your attention to the condition of the Tennallytown road. This is the only toll-road now existing in the District, its charter, under the name of the Rockville Turnpike, having been granted by the State of Maryland in 1818, and in the District of Columbia by act of Congress approved February 15, 1819. All the other toll-roads in the District became free roads in 1871, their charters being purchased by the District of Columbia according to terms prescribed by the act of Congress approved March 3, 1871.

The Tennallytown road is now and has been for years in very bad condition. Although it is the main outlet from Georgetown to Maryland, yet it is never kept in a proper state of repair. I recommend that authority be asked from Congress to condemn this as a free public road, the District reimbursing the corporation for their franchise upon the same terms as were granted to the corporation owning the Seventh-street road, or upon such other terms as may be thought equitable.

During the past year a contract was let for partially repairing the Seventh street road, the extent of the repairs being the lowering of the gutters and trimming of the sides of the road in order to give a proper drainage; no repairs to be made to the macadam (which is in very bad condition), as the funds for current repairs were not sufficient for that purpose. The contractor having failed to carry out his contract was suspended and the contract given to the next lowest bidder, the bondsmen making good the difference. The work is now progressing rapidly.

In June last a contract was awarded for building a new road, called "Tunlaw road," from the end of Back street in Georgetown, in a north-westerly direction, to Loughborough lane. The length of road is about  $1\frac{1}{2}$  miles and effects a saving in distance to persons residing near the terminus of nearly 2 miles. The land was deeded to the District without cost. The work has now nearly been completed.

In connection with the subject of county roads two subjects of considerable importance present themselves. The first is the necessity of properly marking the boundaries and recording the plots of the roads. The old

levy-court stones marking the boundaries are found on certain parts of some of the roads, but on others they do not exist at all. Of fully one-half the roads there is no record or plot whatever in the surveyor's office; not only their direction but their width cannot be stated with accuracy. The propriety of correcting this state of affairs must be apparent to every one.

The second subject is the necessity of imposing some legal restriction on the building of villages with streets running at random just outside of the city limits. Legislation is needed which should require the lines of subdivision of any property in the District, for building purposes, to conform to a general plan to be drawn up by the Commissioners and approved by Congress. Unless this is done now, the District government will be required at no distant day to expend large sums for damages incurred in straightening out the streets of these villages, as they become more populous, to conform to those of the city as well as to each other. It is perfectly feasible (after a proper survey has been made) to draw up a plan of suburban streets of specified width conforming generally to those of the city, but modified as far as may be necessary by the topographical features of the ground. Already we have Le Droit Park, Howard subdivision, Mount Pleasant, and other villages just outside of the city limits, in which the streets do not conform to those of the city or to each other. These villages are extending and are likely to extend, there being always a demand for suburban dwellings near large cities. As the villages become more thickly settled and approach each other there will be great demand to have thoroughfares passing through them, and this can then only be accomplished by condemning property already improved. The beauty of the city of Washington arises from the fact that it has not—like most other cities—grown up at haphazard, but in accordance with a well-matured plan framed in advance and uniformly adhered to for the general good without regard to particular interests. The same plan should now be applied to the suburbs, and it cannot be undertaken too soon. An indispensable prerequisite to this, however, as well as to a proper marking and record of the roads already existing, is a thorough geodetic and topographical survey. The only existing map of the District which makes any pretense to accuracy is that of Boschke, which bears the date of 1856-'57, and needs correction for changes in boundaries which have been since made, as well as for certain original errors. A new survey should be made, based on an accurate triangulation and supplemented by meander lines along all streams, roads, forests, and boundaries of property, and by leveling on 1,000-foot squares, the meanders to be accurate within  $\frac{1}{100,000}$ , and the whole to be plotted on maps of a scale of not more than 200 feet to an inch, or  $\frac{1}{24,000}$ . The monuments marking the road could be placed as the survey progressed.

The total cost of such a thorough survey would be not less than \$6 per acre, or \$3,840 per square mile. There being about 60 square miles in the District outside of the city limits, the total cost would approximate \$200,000. For the present, however, it would only be necessary to complete the triangulation and execute the surveys within a certain distance of the city, leaving the rest until they are needed. But if Congress will authorize the employment of the officers and instruments of the Coast Survey (which would insure the work being done in the best manner known to science), the District would be spared nearly half the expense, and would only be required to pay the actual running expenses in the field and wear and tear of instruments and equipments. I recom-

mend that \$10,000 be appropriated for commencing such a survey at once.

#### REPAIRS OF STREETS, ETC.

The allotment during the fiscal year 1878-'79 for current work of repairs of streets, alleys, county roads, &c., was \$94,241, of which \$26,452.14 was expended on the county roads, as already stated (including \$8,162.09 on the roads in Georgetown), \$58,535.37 on the streets, alleys, and sewers in Washington and Georgetown, and the balance of over \$8,000 on the repairs of Seventh-street road and the construction of the Tunlaw road (not yet completed).

For details of the manner in which this latter has been expended I respectfully refer to the report of the superintendent of repairs, submitted herewith, and to the Appendix (marked P 5). For the current year the appropriation for the same purposes amounts to \$7,500 for salaries of supervisors, and \$75,500 for labor, materials, &c., or a total of \$83,000, being \$11,241 less than last year. This amount will not be sufficient to make all the necessary current repairs and keep the graveled streets of the city as well as the county roads in a proper condition. For the next year the appropriation for these purposes should be not less than \$100,000 in the aggregate.

I invite your special attention to the condition of the sidewalks through the city. Under the old corporation ordinances (Webb's Digest, page 159), which have never been repealed, the property owners or residents are required to keep their sidewalks in a proper state of repair. This ordinance has now grown almost obsolete for lack of means of enforcing it, in connection with sidewalks in front of vacant lots of which the owners may possibly be non-residents. The residents of adjacent property cannot be compelled to repair these, although they are the principal sufferers from their neglect; while on the other hand, the actual owners oppose every obstacle to the expenditure of money from which they derive no immediate benefit. The result is that many thousands of square yards of sidewalks have been allowed to become almost impassable. This can be remedied by only one of two measures, either the old law should be re-enacted and the Commissioners given full power to compel its enforcement by means of larger penalties, or else the District government should assume entire charge of the sidewalks and put them in repair. For this purpose not less than \$15,000 per annum would be necessary.

#### MISCELLANEOUS.

The sweeping of the streets has been performed satisfactorily under contract at the rate of \$33,000 for an amount not less than 92,000,000 nor more than 100,000,000 square yards. The streets are swept according to a schedule prepared in this office and approved by the Commissioners; the most important streets daily, others semi-weekly, weekly, fortnightly, or monthly, according to the amount of travel upon them.

The alleys have also been cleaned by contract once a week in summer and twice a month in winter. Great difficulty is experienced in preventing parties residing in the alleys from throwing refuse matter upon them instead of placing it in receptacles, as required by the ordinances, to be hauled away by the health department. More stringent legislation is needed in this matter for sanitary reasons.

The lighting of the streets has been performed satisfactorily, under contract with the gas companies of Washington and Georgetown. For details I respectfully refer to the report of the superintendent of lamps.

# 388 REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA.

For the operations of the parking commission I respectfully refer to their report (marked P 4.)

Very respectfully, your obedient servant,

F. V. GREENE,  
*First Lieutenant of Engineers.*

Maj. W. J. TWINING,  
*Corps of Engineers, U. S. A., Engineer Commissioner, D. C.*

## APPENDIX P 1.

### REPORT OF THE CHIEF CLERK.

ENGINEER DEPARTMENT, DISTRICT OF COLUMBIA,  
*Washington, October 10, 1879.*

MAJOR: I have the honor to submit the following report of clerical work performed in this department for the fiscal year ending June 30, 1879, and for the first quarter of the present fiscal year:

From July 1, 1878, to June 30, 1879:

Number of communications received, briefed, and recorded in "Letters Received".....	5,408
Number of indorsements upon same.....	3,605
Letters and orders written.....	3,106
Permits, gas, sewer, and water.....	2,776
Number of contracts drawn.....	255
Number of sets of vouchers and bills prepared.....	310
Number of special assessments revised.....	99

From July 1, 1879, to September 30, 1879:

Number of communications received, briefed, and recorded in "Letters Received".....	1,235
Number of indorsements upon same.....	823
Letters and orders written.....	772
Permits, gas, sewer, and water.....	845
Number of copies of contracts drawn.....	135
Number of sets of vouchers and bills prepared.....	342
Number of special assessments revised.....	69

Since the 1st of July last, all of the available clerical force of the District has been employed in the settlement of claims for drawbacks due parties on account of paid-up special assessments under the provisions of the act of Congress approved June 27, 1879. A large majority of all claims presented have been adjusted.

Very respectfully,

JOSEPH C. ROCK,  
*Chief Clerk.*

Maj. WM. J. TWINING,  
*Corps of Engineers, U. S. A.,  
Engineer Commissioner, D. C.*

## APPENDIX P 2.

### REPORT OF THE WATER REGISTRAR.

WATER REGISTRAR'S OFFICE, DISTRICT OF COLUMBIA,  
*Washington, October 10, 1879:*

SIR: I have the honor to make the following report of the operations of this department from July 1, 1878, to June 30, 1879:

## WATER MAINS.

1st. The total length of water-mains laid in the District of Columbia is 908,181 $\frac{1}{2}$  feet, or 172 $\frac{21}{5280}$  miles.

2d. Laid by the United States Government: 30-inch, 12-inch, 6 and 4 inch mains, 93,750 feet, or 17 $\frac{3990}{5280}$  miles.

3d. Laid by the District of Columbia: 36, 30, and 20 inch mains, 31,639 feet, or 5 $\frac{5239}{5280}$  miles.

4th. Laid by the late corporation of Washington: 6 and 4 inch mains, 55,000 feet, or 10 $\frac{2200}{5280}$  miles.

5th. Laid by the water department since its organization to June 30, 1879: 12, 6, and 4 inch mains, 731,583 $\frac{1}{2}$  feet, or 138 $\frac{2943}{5280}$  miles.

Of the above there was laid since July 1, 1878, to June 30, 1879, 16,641 $\frac{1}{2}$  feet, or 3 $\frac{1801}{5280}$  miles, of which the following is a correct list:

Street.	Streets between.	Diameter.	Length.
			<i>Feet.</i>
M north.....	Twenty-third and Twenty-fourth streets northwest, south side.	6-inch...	426
Maryland avenue ..	Third and Four-and-a-half streets southwest, north side ..	do .....	636
C south .....	Sixth and Seventh streets west, center .....	do .....	444
Fourth south .....	And river (blow off) .....	do .....	96
Ninth east .....	East Capitol and A streets north, east side .....	do .....	336
Twenty-first west ..	P and Q streets to center of square between P and Q streets, thence east through alley to Hopkins street, to P street, and thence along P street to Twentieth street, south side.	do .....	1,356
D south .....	First and Second streets east, center .....	do .....	636
Sixth west .....	I and K streets south, west side .....	do .....	720
E south .....	Third and Four-and-a-half streets west, center .....	do .....	540
F south .....	Second and Four-and-a-half streets west, center .....	do .....	1,140
G north .....	Sixth and Seventh streets west, center .....	do .....	552
Thirteenth west .....	Riggs and S streets north, east side .....	do .....	240
Fourteenth west .....	And Riggs street north (making connections) .....	do .....	60
Rhode Island avenue	Twelfth and Thirteenth streets west, north side .....	do .....	254
Seventeenth west ..	T and U streets north, center .....	do .....	528
Fifteenth west .....	T and W streets north, west side .....	do .....	564
Tenth west .....	T and U streets north, west side .....	do .....	312
Virginia avenue ..	Ninth and Tenth streets west, west side .....	do .....	580
Madison street .....	do .....	do .....	50
T north .....	Fifteenth and Sixteenth streets west, center .....	do .....	492
Sixteenth west .....	And V street north (making connections) .....	do .....	4
P north .....	And Bridge (replacing pipe) .....	12-inch..	320
Connecticutavenue.	X and P streets north, west side .....	6-inch..	456
Twelfth west .....	R and S streets north, west side .....	do .....	1,020
	From pump-house No. 2, along U street to stand-pipe, and from stand-pipe to U street, on the east and west sides.	12-inch..	3,787
Seventh west .....	do .....	30-inch..	394
Eighth west .....	And Boundary north (making connections) .....	6-inch..	18
W north .....	And Boundary north (changing main) .....	4-inch..	30
D north .....	Thirteenth and Fourteenth streets west .....	6-inch..	120
C south .....	Seventh and Eighth streets west .....	do .....	252
Connecticutavenue.	Eighth and Ninth streets west .....	do .....	513
	And N street west .....	do .....	120
	Total number of feet .....		16,641 $\frac{1}{2}$

## FIRE-PLUGS.

There are in the District of Columbia 811 fire-plugs, nearly all of the McClelland patent. Sixteen have been erected since July 1, 1878, to June 30, 1879, of which the following is a correct list:

Northwest corner Third street and Maryland avenue, southwest.

Southeast corner Seventh and C streets, southwest.

Southeast corner Twenty-first and P streets, northwest.

Northwest corner Sixth and I streets, northwest.

Northwest corner Sixth and K streets, northwest.

Northwest corner Sixth and L streets, northwest.

Southwest corner Third and E streets, northwest.



Southwest corner Third and F streets, northwest.  
 Northwest corner Ninth and Virginia avenue, southwest.  
 Southeast corner Eighth and Market Space, northwest.  
 Northeast corner Eighth and D streets, northwest.  
 Northwest corner G and North Capitol streets, northwest.  
 West side Connecticut avenue, between N and P streets, northwest.  
 Northwest corner Eighth and C streets, southwest.  
 Northwest corner Fifteenth and P streets, northwest.

## STOP-VALVES.

From July 1, 1878, to June 30, 1879, there have been 30 stop-cocks and boxes inserted, of which the following is a correct list:

Size.	Location.
One 4-way 6-inch .....	M and Twenty-fourth streets, northwest.
One 2-way 6-inch .....	Maryland avenue, near Four-and-a-half street, southwest.
Do. ....	Fourth street, near river, southeast.
Do. ....	Twenty-first and P streets, northwest.
Do. ....	Twentieth and P streets, northwest.
One 4-way 6-inch .....	Second and D streets, southeast.
Do. ....	West side Sixth street, center K street, southwest.
Do. ....	Center Third and E streets, southwest.
Do. ....	Center Third and F streets, southwest.
One 2-way 6-inch .....	Rhode Island avenue, near Thirteenth street, northwest.
Do. ....	North side T street, center Seventeenth street, northwest.
One 12-inch .....	Southeast corner Sixteenth and V streets, northwest.
One 2-way 6-inch .....	Tenth street and Virginia avenue, southwest.
Seven 12-inch .....	Between pump-house No. 2 and stand-pipe.
Six 6-inch .....	Do.
One 2-way 6-inch .....	Seventh and Boundary streets, northwest.
One 4-way 6-inch .....	Ninth and C streets, northwest.
One 2-way 6-inch .....	East side Fourteenth street, center Riggs street, northwest.
Do. ....	Twenty-third street, south of M street, northwest.

## BRANCHES.

There have been inserted, since July 1, 1878, to June 30, 1879, twenty-seven 6-inch T-branches, two 4-inch T-branches, five 12-inch T-branches, one 6-by-12 inch T-branch, two 4-by-12-inch T-branches, and one 12-inch Y-branch, of which the following is a correct list:

No.	Size.	Location.
2	6-inch .....	M street, between Twenty-third and Twenty-fourth streets, northwest.
1	do .....	Maryland avenue, between Third and Four-and-a-half streets, southwest.
1	do .....	C street, between Sixth and Seventh streets, southwest.
3	do .....	Twenty-first, P, and Hopkins streets, northwest.
1	do .....	P street, between Twenty-first and Hopkins streets, northwest.
1	do .....	D street, between First and Second streets, southeast.
3	do .....	Sixth street, between I and L streets, southwest.
1	do .....	E street, between Third and Four-and-a-half streets, southwest.
1	do .....	F street, between Second and Four-and-a-half streets, southwest.
1	do .....	Riggs, near Fourteenth street, northwest.
2	do .....	Seventeenth street, between T and W streets, northwest.
1	do .....	Fifteenth street, between T and W streets, northwest.
1	do .....	Virginia avenue, between Ninth and Tenth streets, southwest.
3	do .....	T street, between Fifteenth and Sixteenth streets, northwest.
1	do .....	Connecticut avenue, between N and P streets, northwest.
1	do .....	Seventh and Boundary streets, northwest.
1	do .....	Connecticut avenue and N street, northwest.
2	do .....	C street, between Eighth and Ninth streets, northwest.
1	4-inch .....	Connecticut avenue, between N and P streets, northwest.
1	do .....	Seventh and Boundary streets, northwest.
5	12-inch .....	Between pump-house No. 2 and stand-pipe.
1	12 x 6 inch .....	Do.
2	12 x 4 inch .....	Do.



## HYDRANTS.

There are in use in the District of Columbia 299 hydrants; 250 in Washington, and 49 in Georgetown. Twenty-one new hydrants have been erected in place of old ones, and 6 new hydrants erected since July 1, 1878, to June 30, 1879, of which the following is a correct list:

M and Twenty-sixth streets, northwest.

Delaware avenue, between B and C streets, northeast.

Seventeenth and N streets, northwest.

P street, between Fifteenth and Sixteenth streets, northwest.

I and Eleventh streets, southeast.

P street, between Seventeenth and Eighteenth streets, northwest.

## NEW HYDRANTS ERECTED IN PLACE OF OLD ONES.

1, Eleventh and I streets, southeast.

1, Fourth and K streets, southeast.

1, K, between Twentieth and Twenty-first streets, northwest.

1, Twenty-fourth, between I and K streets, northwest.

1, P, between Seventeenth and Eighteenth streets, northwest.

1, First and M streets, northwest.

1, Virginia avenue, between Sixth and Seventh streets, southwest.

1, Pennsylvania avenue and Ninth street, northwest.

1, Pennsylvania avenue and Fourteenth street, northwest.

1, Twelfth and U streets, northwest.

1, Eleventh street, between U and V streets, northwest.

1, N street, between Twelfth and Thirteenth streets, northwest.

2, Seventeenth and U streets, northwest.

1, Pennsylvania avenue and Twenty-sixth street, northwest.

1, Franklin street, between Fourth and Fifth streets, northwest.

1, Third and I streets, southeast.

1, Massachusetts avenue and North Capitol street.

1, Ninth and I streets, southeast.

1, First street and Maryland avenue, southwest.

1, Seventh and I streets, northeast.

## TAPS.

From July 1, 1878, to June 30, 1879, there have been made 670 taps, consisting of  $\frac{5}{8}$ ,  $\frac{3}{4}$ , and 1 inch in diameter.

## MISCELLANEOUS.

349 services turned off for non-payment.

127 services turned off for vacant houses.

227 services turned on.

267 services remaining turned off.

1, 260 services measured and examined.

60 leaks in mains repaired.

120 services reported and repaired.

85 fountains repaired.

24,000 times fire plugs flushed.

2, 650 times fire-plugs oiled.

120 fire-plugs repaired.

4, 140 stop-cocks oiled.

96 stop-cocks raised and lowered.

38 stop-cocks repaired.

1, 260 hydrants repaired.

## PUMPS.

There are 438 pumps in use in the District of Columbia, 9 of which were erected between July 1, 1878, and June 30, 1879, of which the following is a correct list :

Twenty-first and O streets, northwest.  
G street, between North Capitol and First streets, northwest.  
New Jersey avenue, between M and N streets, northwest.  
I street, between First and One-half streets, southeast.  
Seventh street, above Boundary street, northwest.  
Seventh street, above Scheutzen Park.  
Fourteenth street road, Mount Pleasant.  
Eighth and Boundary streets.  
Cemetery road, opposite halfway house (county).

## PUMPS REPAIRED.

There have been 1,013 repairs made to pumps since July 1, 1878, to June 30, 1879.

*Statement showing the amount of money collected by the collector of taxes for the water department from July 1, 1878, to June 30, 1879.*

Water-tax .....	\$22,180 46
Water-rent .....	43,209 89
Water-taps .....	1,956 00
Water-permits, &c.....	2,113 25
Total.....	69,459 60

*Expenditures of the water department from July 1, 1878, to June 30, 1879.*

Office-rolls.....	\$7,710 00
Contingent expenses of office.....	416 04
Inspectors' and laborers' rolls.....	32,259 68
Material, &c.....	12,612 21
Advertising.....	90 05
Refunded.....	202 70
Stand-pipe and pump-house .....	29,395 40
Total.....	82,686 08

## WATER-TAX.

The total assessment for water mains laid between July 1, 1878, and June 30, 1879, amounts to \$11,432.58.

*Statement showing amount of outstanding water-main tax and interest on June 30, 1879.*

Tax .....	\$87,957 96
Interest .....	23,389 14
Total.....	111,347 10

Table showing amount of water-main tax collected by the collector of taxes from July 1, 1878, to July 30, 1879.

Date.	Tax.	Interest.	Total.
July, 1878 .....	2,741 71	352 87	3,094 58
August, 1878 .....	1,949 97	368 48	2,318 45
September, 1878 .....	1,630 82	314 00	1,944 82
October, 1878 .....	1,496 37	133 36	1,629 73
November, 1878 .....	1,285 50	202 96	1,488 46
December, 1878 .....	1,182 58	243 13	1,425 71
January, 1879 .....	1,000 47	143 67	1,144 14
February, 1879 .....	1,410 61	195 96	1,606 57
March, 1879 .....	2,453 08	172 33	2,625 41
April, 1879 .....	1,365 28	200 07	1,565 35
May, 1879 .....	1,196 10	157 60	1,353 70
June, 1879 .....	1,789 87	193 67	1,983 54
Total .....	19,502 36	2,678 10	22,180 46

Principal of water-main tax assessed to the District of Columbia and unpaid June 30, 1879, \$2,272.12.

Principal of water-main tax assessed to the colored schools of the District of Columbia and unpaid June 30, 1879, \$419.57.

On the 1st of July last the accounts of the department were in as good condition as they have been for some years.

The charges for water rents, when compared with those in other cities, show that they are less by two-thirds than in any of them. The argument used against paying any increased rent is that, Congress having brought the water into the District at the expense of the United States, the charges of the department ought to be nominal.

When it is fully understood that the vast system of water-works over which we have to watch and keep in repair, I feel assured that complainants will be more reasonable in their statements.

1st. We have 172 miles of mains to keep in repair. During the time of the "comprehensive improvements" a large number of the streets were graded, in which the water mains were not lowered. The consequence is that, during the very cold weather we endured last winter, the water froze in the pipes, they being so near the surface, and it was a common thing for the department to have a gang of 15 or 20 laborers working day and night for days at a time repairing leaks.

2d. We have 811 fire-plugs which have to be kept continuously oiled and flushed so that they may be in perfect working order in case of fire.

3d. We have more than 800 large stop-cocks which have to be likewise oiled and kept in repair.

4th. We have 299 hydrants which have to be kept in repair.

By means of the furloughing of a number of our men in the year, the department has been greatly embarrassed and very many complaints have been made concerning hydrants, pumps, &c., being out of working order. By diligent work, after taking on some of the furloughed men, we were enabled at last to make all necessary repairs. The furloughing of the water inspectors has proved a great inconvenience to the department in its operations. It is true that the police assist us more or less, but with the small force they have and the extensive territory to guard, they cannot do efficient work for the water department. Besides, our inspectors have been regularly drilled to their work of inspection and go about their duties in the best and most efficient manner, and remedy many abuses in regard to the wastage of water, &c.

It will be seen that the revenue of the department is inadequate to its wants, for after paying out to the sinking fund \$15,000 per annum, and over \$29,000 interest on outstanding bonds, there is not enough left

to keep up so extensive a system of water supply, and keep two engines pumping water continuously for the high grounds. The water fund has been running short each year for a number of years and the deficit has been charged up to the general fund, but now the law is enforced which requires the department to be self-supporting, hence the necessity of an increase in the revenue of the department.

It has been suggested that the water should be free and the expense of keeping up the system of supply be charged up to the general fund.

This would be manifestly unjust, as there are a large number of taxpayers who have no facilities for using water, and they could not be expected to help to pay for an expense in which they have no direct benefit. When the water was first introduced into the District there were only from 3,000 to 4,000 water-takers, but at the present time there are about 17,000 water-takers. This accounts in a great degree for the scarcity of water in certain localities. If Congress will cause the dam at the Great Falls to be raised and a larger supply of water to be brought into the cities of Washington and Georgetown, I feel satisfied that no complaint will be made about the charge for water. The trouble which the department has to contend with is the inadequate supply.

The stand-pipe is doing good service for a large portion of the city. I have no hesitation in saying that if it were dispensed with, it would bring down upon the heads of the District governors and the water department employes such a storm of indignation from those who derive benefit from it that there would be no small number of persons advocating to have it rebuilt and put in complete working operation again. It cannot be expected to supply more water than the limit of its capacity.

The decisions of the water department upon questions raised by those who have had business with it have been made in strict accordance with the laws governing it, and by which its officers are bound, and however unreasonable and harsh they may appear, they have no alternative. As a whole, the people have been very patient and courteous to the department.

The clerks and other employes of the department are efficient and courteous gentlemen, and have been always ready to lend their aid in performing any required duties, either in or out of office hours. In the performance of the extra duties imposed upon them in consequence of the refunding of the water rents, which was rendered necessary by the decisions of the court, they have been uniformly faithful and diligent. Few errors have occurred, fewer than would have been supposed possible, in view of the paucity of the clerical force and the necessity of accomplishing this work in a given time, in addition to the regular work of the office. The thanks of the District government and myself are due to them for their efficiency and zeal.

*Estimate for the expenses of the water department for the fiscal year ending  
June 30, 1881.*

For salaries of water registrar, inspector and tapper, six clerks, and one messenger .....	\$8,640 00	
Add 20 per cent. ....	1,728 00	
		\$10,368 00
For ten inspectors, at \$900 per annum each .....		9,000 00
For contingent expenses of office, viz: stationery, printing, advertising, &c .....		1,000 00
For carriage and driver .....		900 00
For labor, repairing, and oiling fire-plugs, stop-cocks, leaks in mains, hydrants, flushing water-mains, &c* .....		20,000 00

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For material, fuel for high service-pumps, oil, tools, and repair of tools, &c* .....	\$9,400 00
For erecting new pumps, deepening wells, repair of pumps, &c .....	3,250 00
	<hr/> 53,918 00

I think it but just that the 20 per cent. which was deducted from the salaries of the employés of the water-office in 1874 should be restored, as they are called upon, *constantly*, to work out of office hours. I also think it but just that Congress should appropriate for 50 per cent. of the expenses of the water department, the same as it does for the other expenses of the district, for the current fiscal year.

I am, sir, your obedient servant,

THOS. C. COX,  
*Water Registrar.*

Maj. WILLIAM J. TWINING,  
*Engineer Corps, U. S. A.,*  
*Engineer Commissioner District of Columbia.*

## SUPPLEMENT TO THE WATER REGISTRAR'S REPORT FROM JULY, 1 1878, TO JUNE 30, 1879.

WATER REGISTRAR'S OFFICE, DISTRICT OF COLUMBIA,  
*Washington, October 15, 1879.*

SIR: I have the honor to make the following supplemental report of the operations of this department from July 1, 1879, to September 30, 1879.

### WATER-MAINS.

1st. The total length of water-mains laid in the District of Columbia is 909,646½ feet or 172 <sup>1486½</sup>/<sub>5280</sub> miles.

2d. Laid by the water department since its organization to September 30, 1879; 12, 6, and 4 inch mains, 733,048½ feet, or 138 <sup>4408½</sup>/<sub>5280</sub> miles.

3d. Of the above there was laid since July 1, 1879, to September 30, 1879, 1,465 feet, of which the following is a correct list:

P north, Twentieth, and Twenty-second streets, north side, 6-inch .....	1,153
Connecticut avenue, N and O streets, east side, 6-inch, .....	312

Total number of feet ..... 1,465

### FIRE-PLUGS.

There are in the District of Columbia 812 fire-plugs, nearly all of the McClelland patent. One erected at the northeast corner of Twenty-second and P streets, northwest.

### STOP-VALVES.

From July 1, 1879, to September 30, 1879, two 6-inch four way stop-cocks have been inserted at the following places:

Southeast corner Twentieth and P streets, northwest.

Northwest corner Connecticut avenue and N street, northwest.

\* This does not include the cost for laying water-mains, as they are paid for by special assessment.

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## BRANCHES.

There have been inserted three 6-inch T branches from July 1, 1879, to September 30, 1879, at the following places:

Two at P street, between Twentieth and Twenty-second streets, northwest.

One at Connecticut avenue, between N and O streets, northwest.

## TAPS.

From July 1, 1879, to September 30, 1879, there have been made 180 taps, consisting of  $\frac{3}{4}$ ,  $\frac{1}{2}$ , and 1 inches in diameter.

## MISCELLANEOUS.

- 1 service turned off for non-payment.
- 83 services turned off for vacant houses.
- 66 services turned on.
- 268 services remaining off.
- 315 services measured and examined.
- 20 leaks in mains repaired.
- 30 services reported and repaired.
- 22 fountains repaired.
- 6,000 times fire-plugs flushed.
- 598 times fire-plugs oiled.
- 30 fire-plugs repaired.
- 1,060 stop-cocks oiled.
- 24 stop-cocks raised and lowered.
- 12 stop-cocks repaired.
- 340 hydrants repaired.

## PUMPS.

There have been 270 repairs made to pumps since July 1, 1879, to September 30, 1879.

*Statement showing the amount of money collected by the collector of taxes for the water department from July 1, 1879, to September 30, 1879:*

Water-rent.....	\$58,455 24
Water-tax.....	12,127 00
Water-taps.....	537 00
Water-permits, &c.....	737 42
Total.....	71,856 66

*Expenditures of the water department from July 1, 1879, to September 30, 1879:*

Office rolls.....	\$2,591 79
Inspectors' and laborers' rolls.....	4,662 55
Material, &c.....	6,388 12
Excessive water-rents refunded.....	30,000 00
Stand-pipe and pump-house.....	3,237 47
Total.....	46,879 93

## WATER TAX.

The total assessment for water-mains laid between July 1, 1879, to September 30, 1879, amounts to \$1,790.38.

*Statement showing amount of outstanding water-main tax and interest on September 30, 1879.*

Tax .....	\$76,585 65
Interest .....	22,493 19
Total .....	99,078 84

*Table showing amount of water-main tax collected by the collector of taxes from July 1, 1879, to September 30, 1879.*

	Tax.	Interest.	Total.
July 1, 1879.....	\$2,555 46	\$346 71	\$2,902 17
August, 1879.....	2,172 12	399 36	2,571 48
September, 1879.....	5,163 50	1,489 85	6,653 35
Total.....	9,891 08	2,235 92	12,127 00

I am, sir, your obedient servant,

THOS. C. COX,  
Water Registrar.

Maj. WILLIAM J. TWINING, U. S. A.,  
Engineer Commissioner of the District of Columbia.

## APPENDIX P 3.

## REPORT OF THE SURVEYOR.

SURVEYOR'S OFFICE, DISTRICT OF COLUMBIA,  
Washington, D. C., October 10, 1879.

SIR: In compliance with your instructions, I have the honor to submit the following report of the operations of this office for the fiscal year ending June 30, 1879.

During the year services have been performed for property-holders as follows:

Surveys of lots in Washington and Georgetown .....	417
Surveys of property in county of Washington.....	2
Plats furnished (other than survey plats).....	58
Subdivisions made and recorded and certified plats issued.....	88

By order of the Commissioners of the District of Columbia, services have been rendered the District of Columbia as follows:

*Surveys.*

Squares in the city of Washington.....	2
Squares in the city of Washington for numbering houses.....	7
Squares in the city of Georgetown for assessors.....	32
Lots in the city of Washington .....	9
Streets in the cities of Washington and Georgetown .....	5
Alleys in the cities of Washington and Georgetown.....	4
Lots in the county of Washington .....	20
Roads in the county of Washington.....	1

*Plats.*

Surveys, subdivisions, squares, streets, and alleys ..... 255

*Examinations and reports.*

Upon streets, alleys, roads, &c..... 28

I have the honor to be, very respectfully, your obedient servant,  
JNO. A. PARTRIDGE,

*Surveyor of the District of Columbia.*

Maj. W. J. TWINING,

*Corps of Engineers, U. S. A.,*

*Engineer Commissioner District of Columbia.*

SURVEYOR'S OFFICE, DISTRICT OF COLUMBIA,  
*Washington, D. C., October 10, 1879.*

SIR: I have the honor to submit the following report of the operations of this office from the 30th of June to 10th of October, 1879.

During this time services have been performed for property-holders as follows:

Surveys of lots in Washington and Georgetown.....	106
Surveys of property in county of Washington.....	2
Subdivisions made and recorded and certified plats issued.....	30
Plats furnished (other than survey plats).....	7

By orders received from the honorable Commissioners, services have been rendered the District of Columbia as follows:

*Surveys.*

Lots in the county of Washington .....	2
Roads in the county of Washington .....	1
Alleys in the city of Washington .....	2
Squares in the city of Washington for numbering houses .....	1

*Plats.*

Surveys, subdivisions, squares, streets, and alleys..... 46

I beg leave to call attention to so much of my annual reports for 1877 and 1878 as relates to the resurvey of Georgetown, the complete definition of the boundary lines of the District, and to such fixed compensation to the surveyor as shall be consistent with the duties and responsibilities of his office.

I have the honor to be, very respectfully, your obedient servant,  
JNO. A. PARTRIDGE,

*Surveyor of the District of Columbia.*

Maj. W. J. TWINING,

*Corps of Engineers, U. S. A.,*

*Engineer Commissioner District of Columbia.*

*Estimate of expenses for conducting the office of the surveyor of the District of Columbia for the year ending June 30, 1881.*

Books, stationery, fuel, and other contingencies.....	\$930 00
Salaries of surveyor and employes.....	7,900 00
Total for fiscal year ending June 30, 1881.....	8,830 00



*Estimate for field operations.*

For establishment of corner-stones and defining boundary of the District...	\$4,000 00
For continuation of surveys in Georgetown.....	3,000 00
Total for field operations.....	7,000 00

Respectfully submitted.

JNO. A. PARTRIDGE,  
*Surveyor of the District of Columbia.*

## APPENDIX P 4.

## REPORT OF THE PARKING COMMISSION.

The parking commission have the honor to offer the following report for the year ending June 30, 1879:

During that period 3,571 trees have been planted and 2,009 holes prepared; 474 old and decaying trees have been removed. There are still a great number of decaying trees that require removal. There are also many trees in all sections of the city that are standing near the central parts of sidewalks, or at least located where they interfere with the full occupancy of the sidewalk, greatly to the inconvenience of pedestrians, all of which should be removed. Most of these trees have but little intrinsic value as shade trees. They are generally unhealthy, some from old age and neglect, others from injuries received during the operations of grading and paving; but their greatest evil is that they prevent the growth of younger trees in their vicinity. In many instances the continuation of sidewalk planting has been omitted opposite these older trees, or, where the planting has been continued parallel to old trees, the growth of the young trees is enfeebled, leaving a gap in the line, thus destroying uniformity in design and the future beauty and utility of the planting.

The interference of the telegraph-wires with the trees is assuming an importance which is likely to increase with the growth of the trees. It is unfortunate that the telegraph-poles and the trees are mostly placed in the same lines. To keep the trees pruned down so as not to interrupt the working of the telegraph-wires will result, in many cases, in destroying them. Before young trees have got well started to grow calls are made to prune off their tops that the wires may be free. Some wires, by actual measurement, are only 18 feet above the level of the sidewalk, so that if the trees have to succumb to wires placed so near the pavement it would seem injudicious to plant them, because if they have to be denuded of all growth above that limit they cannot long remain either useful or ornamental.

It seems quite practicable to arrange trees and telegraph poles in this city so that they will not interfere with each other. The wide parkings would seem to afford facilities for such an arrangement. Whatever may be done it is perfectly evident that the time will soon arrive when the question will intrude itself in a way that will demand an answer—whether trees or telegraph poles are to occupy the coveted position on the sidewalks?

The labor required to give ordinary care to 60,000 trees on the streets—repairing boxes, cutting out weeds, keeping down insects, securing fastenings, pruning off broken limbs, &c.—has become an item of consid-

erable importance in connection with the amount appropriated for the work. The boxes around the earlier planted trees have become very much decayed, and every storm that passes over the city, and every run-away horse that makes an effort to occupy the sidewalk, distinguish their tracks by prostrate tree-boxes. In repairing these it is found necessary to enlarge, strengthen, and otherwise remodel them so as to adapt them to the increased size of the trees. The expenditure in this connection during the year was over \$2,000, and about 20,000 boxes require renewal as soon as they can be reached. With thousands of the oldest planted trees the only use of the box is to guard the trees from being injured by horses nibbling their stems, but until rules are made, or enforced, in regard to the fastening of horses on the streets, the trees will require to be protected. We would again renew the suggestion that rings be attached to the curbstones for the purpose of securing horses, as being at once convenient and unobtrusive.

The care of the spaces around the public school-houses, and those of the various reservations and public parkings, require greater attention than they have lately received. Weeds have also been allowed to extend around the trees to a greater extent than is consistent with their best condition of growth or with the reasonable demands of public taste.

We would again allude to the importance of planting, without delay, all the streets and all spaces where trees can be placed on the river front. This strongly commends itself as a sanitary measure which could not be otherwise than beneficial.

As the city trees increase in size their beauty and utility become more apparent. The cooling influence of the vast assemblage of leaves now so equally distributed over the length and breadth of the city will sensibly modify the summer heat; and the moisture they require for their sustenance having to be drawn from the soil by the roots, results in the twofold benefit of cooling the atmosphere and at the same time draining the soil of superfluous moisture, the latter being, perhaps, the most important prerogative of trees in cities.

All of which is respectfully submitted.

WM. R. SMITH.  
JOHN SAUL.  
WILLIAM SAUNDERS.

Maj. W. J. TWINING,  
*Corps of Engineers,*  
*Engineer Commissioner District of Columbia.*

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#### APPENDIX P 5.

#### REPORT OF THE SUPERINTENDENT OF REPAIRS.

OFFICE OF SUPERINTENDENT OF REPAIRS,  
October 1, 1879.

SIR: I have the honor to submit a report of the operations of this office from June 30, 1878, to June 30, 1879, inclusive, and a supplemental report from July 1, 1879, to September 30, inclusive, for a portion of which period, to wit, from June 30, 1878, to September 30, a supplemental statement was made and is now included in this report.

During the period embraced from June 30, 1878, to June 30, 1879, a greater amount of work in proportion to the force employed has been

performed than former periods of equal time, resulting from a more systematic arrangement of the employes in the character and location of the work. All complaints referred to this office by the engineer have been promptly attended to, and, upon the completion of the work, answers returned. A large amount of work (of small extent in each particular case) has been done which my personal observation deemed necessary, involving no extra labor or expense. I renew my suggestions (made in a report of October 1, 1877) for authority to have constructed proper carts and utensils for cleansing, and the reception and conveyance of the contents from traps, sewers, and manholes to the dumping-ground.

#### SEWERS.

All the large cribs at the heads of the various sewers have been relieved of the sand and gravel washed into them by storms, and are at date of this report in good order. The various sewers have been cleansed stately and systematically, and incidentally upon specific complaints. Several small lines of sewers have been laid in streets and alleys, as well as extensions of those already laid. (See Table C as to the extent of the material used.) There have been repairs to sewers in various parts of the city other than small repairs, which required the following large amount of material in the aggregate, to wit: Sixth and M streets east; North Capitol and E streets; Gales's Woods; Indiana avenue and Third street; Indiana avenue and First street northwest; and Boundary and First street northwest; North Capitol and O streets; in which were used 47,200 bricks, 126 barrels cement (laying and grouting), and 110 perches of stone.

#### SEWER-TRAPS.

The sewer-traps have been cleaned stately about once a month, and special complaints of any particular trap or traps have been promptly attended to.

The overseer in charge is instructed to report any defect or break, needing repairs, which he may discover in the progress of his work, so that I may have them promptly repaired. Many such have been reported and promptly attended to; a large number have been reset and several new ones constructed.

#### ALLEYS.

The alleys embraced in the contract with Mr. Draney have been cleaned according to the terms of the contract and its extensions during the summer months. The work has been more energetically and carefully performed than heretofore. Personal inspection of the work during its progress has been given by those in charge of the alley cleaners.

Many sections of the public alleys have been repaired. New pavements of cobble-stone, with center gutters of flag-stone, have been laid in some; other alleys have had the depressed portions filled with gravel, abating small pools of stagnant water. For material used, see Table C.

#### STREETS AND AVENUES.

I have laid during the year 2,055 square yards of new sidewalks, and set 1,350 linear feet of curbing (see Table C). Mr. Wright, the contractor for sweeping and watering the streets and avenues, has performed his work satisfactorily, as per daily report of Mr. Hines, inspector.

There has not been a requisition for cobble-stone or gravel during the year, either material being obtained in progress of work from streets, or by consent of owners of private property, without cost.

Respectfully submitted.

E. M. CHAPIN,  
*Superintendent of Repairs.*

Maj. W. J. TWINING,  
*Engineer Corps, U. S. A.,  
Commissioner District of Columbia.*

A.—Statement showing character of work and cost of labor and materials from June 30, 1878, to June 30, 1879.

Nature of work.	Labor.	Material.	Total.
Salaries and expenses of office .....	\$3,583 24	.....	\$3,583 24
Miscellaneous expenses, including inspectors, &c .....	3,624 00	.....	3,624 00
Cleaning traps .....	4,715 16	.....	4,715 16
Cleaning sewers .....	9,757 85	.....	9,757 85
Repairing traps .....	1,511 54	\$311 81	1,823 35
Repairing sewers .....	2,413 00	2,427 21	4,840 21
Repairing streets, avenues, and alleys .....	25,591 43	2,213 09	27,804 52
Cleaning streets, gutters, &c .....	1,404 41	.....	1,404 41
Repairing bridges .....	111 75	803 38	915 13
Sweeping streets .....	67 50	.....	67 50
Total .....	52,779 88	5,755 49	58,535 37

B.—Statement showing amount of appropriations and expenditures for labor from June 30, 1878, to June 30, 1879.

Amount allowed for labor at \$4,000 per month .....	\$48,000 00
Allowance for extraordinary work requiring additional force .....	3,248 70
Total allowance .....	51,248 70
Total expenditure for labor .....	\$52,779 88
From which deduct salaries and expenses of office .....	3,583 24
Giving amount expended for labor .....	49,196 64
Amount unexpended .....	2,052 06

C.—Statement of amount and kind of work done in various localities other than ordinary repairs.

Cobble-stone pavement .....	yards ..	8,589
Gutter-stone .....	feet ..	6,776
12-inch sewer .....	do ..	2,101
6-inch sewer .....	do ..	71
18-inch sewer .....	do ..	81
Manholes .....	number ..	15
Sewer-traps .....	do ..	12
Curbing .....	feet ..	1,350
Brick pavement .....	square yards ..	2,055

OFFICE OF SUPERINTENDENT OF REPAIRS,  
October 1, 1879.

SIR: I have the honor to make a supplemental report of work executed from July 1, 1879, to September 30, inclusive. A large number of sewer-pumps and hydrant trap-drops with sewer connections have been constructed, relieving the carriageway and pavements from water stand

ing upon their surface. Statement D will show the amount of material used in their construction. Boundary street from Fifth street west to Ninth street east has been improved in its roadway by trimming up its gutters, gravelling portions of its surface, and cutting water drains on each side where no gutters were laid, making it a very passable road. Maryland avenue, from Second to Fifteenth streets east, has been trimmed up and gravelled, making it a very fine road; 7,512 cubic yards of gravel were laid upon its surface, the gutters on each side cleaned, and those at the crossings of Fourth and Sixth streets east relaid wider and more shallow. Pennsylvania avenue, between Eighth and Eleventh streets east, has been trimmed up and gravelled, and is now in good order. Various streets and alley gutters have been repaired. For statement of this work, and upon sewers, manholes, traps, &c., see Statement D.

The defects of various bridges have been repaired, and a large number of pools of stagnant water have been abated. The contractors for sweeping the streets and avenues and for cleaning the alleys have kept their work well up to schedule. A large amount of work (sanitary) has devolved upon this office from complaints of the health officer, all of which has been promptly attended to. (See the annexed statements.) D shows the amount and kind of work done in various localities from July 1, 1879, to September 30, inclusive; the Statement E shows the character of work and cost of labor and materials used from July 1 to September 30, 1879, inclusive; Statement F shows amount of appropriations and expenditures from July 1 to September 30, inclusive.

Respectfully submitted.

E. M. CHAPIN,  
*Superintendent of Repairs.*

Maj. W. J. TWining,  
*Engineer Corps, U. S. A., Commissioner District of Columbia.*

*D.—Statement of amount and kind of work done in various localities.*

New brick pavement.....	yards..	255
Relaid granite pavement.....	do...	41
Laid cobble-stone pavement.....	do...	480
Relaid cobble-stone pavement.....	do...	6, 129
6-inch sewer.....	feet..	308
8-inch sewer.....	do...	89
12-inch sewer.....	do...	228
15-inch sewer.....	do...	148
Sewer-pump and hydrant-traps.....	number..	22
Flagging or gutter stone.....	feet..	4, 289
Grading.....	yards..	401
New curbing.....	feet..	575
Old curbing.....	do...	323
Manholes.....	number..	1

*E.—Statement showing character of work and cost of labor and materials from July 1, 1879, to September 30, 1879, inclusive.*

Nature of work.	Labor.	Material.	Total.
Miscellaneous expenses, including inspectors, &c.....	\$651 50		
Cleaning traps.....	1, 222 75		
Cleaning sewers.....	2, 251 69		
Repairing traps.....	393 56		
Repairing streets, sewers, avenues, alleys, gutters, bridges, &c..	7, 870 95		\$12, 390 45
Material account for July.....		\$493 19	
Material account for August.....		368 58	
Material account for September.....		487 27	1, 249 04
Total.....	12, 390 45	1, 249 04	13, 639 49

F.—*Statement showing amount of appropriation and expenditures for labor and materials from July 1 to September 30, inclusive.*

Amount allowed for labor and material, at \$3,500 per month.....	\$10,500 00
Amount allowed for extraordinary work and material.....	3,139 49
Total allowances.....	13,639 49
Total expenditures for labor.....	\$12,390 45
Total expenditures for material.....	1,249 04
Total expenditures.....	13,639 49

## APPENDIX P 6.

## REPORT OF THE SUPERINTENDENT OF LAMPS.

## ENGINEER'S OFFICE,

Washington, D. C., October 6, 1879.

SIR: I have the honor to submit my report of the operations of this office, and the expenditures incurred, from June 30, 1878, to June 30, 1879. Also a supplemental report from June 30 to September 30, 1879.

The law of Congress governing the lighting of the street-lamps of this city still remains on the statute-books. The lamps during the past year have been lighted the full number of hours required by law, viz, 2,200.

The contract made with the Washington Gas-Light Company has been faithfully carried out and the work satisfactorily performed. A considerable saving has been effected by requiring the gas company to make all repairs, as only a portion was covered by their former contract, such as the removal of lamp-posts on the line of improvements, and resetting them when necessary; the removal of old posts from one point to another, and the expense attending the transportation of the same. A remedy has been found to prevent the freezing of lamps during the winter months, which has been a great annoyance to this office and the public; the remedy is by enlarging the service-pipe and extending it one foot above the pavement-line with one-inch pipe, which is now carried out on all new posts erected, and on all old posts when the service-pipe is renewed, without any additional cost to the city.

A smaller number of lamps have been erected than for five years previous; not that the demand has decreased, but because greater caution has been used in recommending none unless they were an actual necessity. There are some portions of the city which will soon require lamps, as the suburbs of the north and northwest are being rapidly built up. The lamps will also be valuable adjuncts to the police in the suppression of crime.

A large number of lamps on streets and avenues, erected and formerly lighted by the general government, have been extinguished, owing to the excess of numbers usually allowed to squares. The posts and lamps have been removed from and erected on squares where needed. A portion of these posts were used in lighting Fourteenth street from Boundary to Park avenue, and Seventh street from Boundary to Park avenue. Le Droit Park has also been lighted; the lamps and posts were erected and paid for by the property holders. Lamps have also been erected in Uniontown, which will be a great advantage to the Government Insane Asylum, as there is now a continuous light to within a short distance of that place, as the general government has lighted Anacostia bridge across the Potomac. New ornamental lamps have been purchased and

are now ready to be placed on the large park posts in the government reservation which the city is now lighting, but which properly belongs to the office of public buildings and grounds. I would again call your attention to the bad practice of allowing the lamps to be covered by awnings, as on some of our public business thoroughfares, entirely obscuring the light and rendering them entirely useless to the public. The removal of lamps from posts where the lamps have been broken has had a salutary effect; while no arrests have been made, there has been no repetition of the offense after the lamps have been replaced. I would also recommend that no more permits be granted to churches or societies to place transparencies over the lamps during fairs or festivals, as the glass and often the lamps are broken. I would also call your attention to the last report of the Superintendent of Police in regard to the lighting of alleys, as I think it is one that merits your careful consideration. After nightfall the fleeing criminal seeks refuge in the alleys, and in most cases is lost to the pursuing officers under the cover of darkness and thus escapes arrest. It would require but 30 lamps to light the most notorious alleys, at a cost of \$500.

The present method of placing street signs on top of the lamps appears to be more satisfactory than the old plan, as it does not interfere with the light and is not liable to be misplaced as the old signs. The letters are cut in the glass, and are indestructible except by breakage; they will also prove faithful guides to our own citizens and strangers. The present contractor is required to keep the signs in repair for the space of six months; at the expiration of that period I would respectfully recommend that the Washington Gas-Light Company be required to keep them in repair.

Being desirous of avoiding any increase in the expense of lighting the city, but of reducing the expense where possible, I would respectfully recommend that the attention of the Superintendent of Public Buildings and Grounds be called to the large number of lamps around government reservations, which the city is now lighting, but which properly belongs to his department, and which would also be a large saving to the city, as I see no other way of reducing the cost of lighting the city, except by a reduction in the price of gas. Although using a larger burner than is used in a number of our larger cities, I do not think that the burner can be reduced with economy, as the distance between the lamps is greater than in cities using smaller burners, and for eight months in the year are covered with a dense foliage, owing to the closeness of the trees, which no city has to obstruct the light to the extent of ours in Washington. New York, Philadelphia, Baltimore, and Boston are lighted from 3,600 to 3,800 hours per annum against 2,200 hours in this city, which requires them to practice some economy in the size of their burners, but at present New York and other cities are recommending an increase in the size of their burners, and with good reason, as the illuminating power increases with large burners in a greater ratio than the consumption.

It is generally supposed that in proportion to the quantity of gas issuing from a burner so would be the amount of light obtained; that is, if a burner burning 5 feet of gas gives the light of twelve candles, that to reduce the flame to  $2\frac{1}{2}$  feet would give the light of 6 candles; that is far from the case, as there is a particular point in the consumption of gas at which a maximum light is obtained. Per example, if a burner consumes 5 feet of gas per hour and gives the light of 12 candles, and this be reduced so that only three-fourths of that quantity is burned, then, instead of the light being equal to 9 candles, the theoretical proportion, it

will be equal to 6 candles only, causing a direct loss of one-third. Whenever the orifice of the burner is too small a greater increase of pressure is required to force it out, and the light derived is diminished just in proportion to that increased pressure.

In Georgetown a small number of lamps have been erected, and a small number will be required in the future, as the present improvements do not warrant them. Owing to a continued misunderstanding with this company, and with your authority, the burners on the street-lamps in the entire city were changed; the burners were cut and tested to conform to the heavy pressure in that city: this change will be a saving of at least \$2,000 per annum.

Very respectfully,

W. H. BAILEY,  
*Superintendent of Lamps.*

Maj. WM. J. TWINING,  
*Corps of Engineers, U. S. A.,*  
*Engineer Commissioner, District of Columbia.*

TABULAR STATEMENT OF EXPENDITURES FOR LAMPS AND GAS FROM  
JUNE 30, 1878, TO JUNE 30, 1879.

*Washington, D. C.*

Gas for street-lamps .....	\$112,886 62
Gas for school-houses .....	920 53
Gas for station-houses .....	1,906 54
Gas for market-houses .....	1,217 29
Gas for District offices .....	592 07
Gas for police court .....	101 07
Gas for health-office .....	19 36
Gas for pump-house .....	176 65
Gas for workhouse .....	25 70
43 lamp-posts, purchased .....	271 71
145 lanterns, purchased .....	606 38
28 ornamental lamps, purchased .....	406 00
Erection of lamps .....	520 59
Repairs incidental to improvement .....	92 15
Service-pipe for pump-house .....	18 80
1 globe .....	2 00
Painting 151 lamp-posts .....	26 80
	<hr/>
	119,799 86

*Georgetown.*

Gas for street-lamps .....	\$9,992 71
Gas for police-station .....	142 00
Gas for market-house .....	107 75
Gas for pump-house .....	169 50
12 lamp-posts, purchased .....	69 53
57 lamps, purchased .....	231 08
Repairs of tin-work .....	187 17
Glass and globes .....	113 20
Service-pipe and fittings .....	59 74
Matches .....	45 00
Salaries of lamp-lighters .....	2,040 00
	<hr/>
	133,017 54

Number of lamps in Washington .....	3,551
Number of lamps in Georgetown .....	379
	<hr/>
Total in District of Columbia .....	3,930



# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 407

## TABULAR STATEMENT OF EXPENDITURES FOR LAMPS AND GAS FROM JUNE 30, 1879, TO SEPTEMBER 30, 1879.

### *Washington, D. C.*

Gas for street-lamps .....	\$28,445 33
Gas for school-houses .....	52 93
Gas for market-houses .....	234 71
Gas for station-houses .....	341 85
Gas for District offices .....	78 32
Gas for police court .....	20 48
Gas for pump-house .....	73 13
Gas for workhouse .....	36 24
Gas for health-office .....	2 93
9 lamp posts, purchased .....	48 15
32 lamps, purchased .....	117 76
	<hr/>
	29,441 93

### *Georgetown.*

Gas for street-lamps .....	1,543 07
Gas for station-house .....	28 25
Gas for market-house .....	26 75
Gas for pump-house .....	54 00
12 lamps, purchased .....	44 16
Repairs of tin-work .....	47 53
Glass and globes .....	39 00
Matches .....	7 50
Lamp-lighters' salaries .....	510 00
	<hr/>
	31,742 19

### *Estimate for gas, erection and repairs of street-lamps, and salaries for the fiscal year ending June 30, 1881.*

Gas for street-lamps .....	\$118,000 00
Erection of street-lamps .....	1,800 00
Repairs of street-lamps .....	1,500 00
Matches .....	60 00
Salaries of lamp-lighters .....	2,400 00
Salary of superintendent .....	800 00
	<hr/>
	124,560 00

The above estimate for gas is based on \$1.75 per thousand feet for street-lamps.

## APPENDIX P 7.

### ORDERS AFFECTING THE REVISION OF ASSESSMENTS.

The following orders affecting the revision of assessments have been received since last report:

MARCH 15, 1879.

*Ordered,* That when an excess of assessment for special improvement has been paid upon one part of a corner lot, such excess can be applied to payment of assessment upon the other part of the same lot, provided no certificate of assessment is outstanding and held by a third party.

APRIL 25, 1879.

Work done subsequent to the original assessment shall not be added to the statement of expenditures in the revision of the assessment.

JULY 19, 1879.

Commissioner W. J. TWINING:

SIR: I am directed to notify you that Mr. W. O. Roome has been designated to fill and sign the certificates for drawbacks on special assessments, upon data to be furnished by the clerk in charge of special assessments.

Very respectfully,

WILLIAM TINDALL, *Secretary.*

*Ordered,* That all assessments on county roads, made under the act of legislative assembly of August 10, 1871, except those on the Seventh street road, the Fourteenth street road, the Columbia road, and the Canal road, are hereby annulled, the work done on such roads, in the opinion of the Commissioners, not being of a character justifying assessments.

In respect to the roads excepted above, the Commissioners will make careful examination to determine whether the work done is assessable, and what will be a just basis of revision.

JULY 26, 1879.

*Ordered,* That in the case of walls, coping, steps, and work of like character, the assessment will be separated from the regular assessments, and simply be held as an offset to any damage that may hereafter be claimed to have been done.

JULY 29, 1879.

*Ordered,* That the statement made by Mr. G. W. Beall, clerk in charge of special assessments, be sent by Mr. W. O. Roome to the office of the treasurer and assessor, who will have entered thereon a statement as to whether the property therein mentioned is still assessed in the name given by Mr. Beall, and if changed, the name of the present owner. Every person receiving a drawback certificate and claiming that he is and has been continuously the owner of the property assessed, will be required to make oath to the fact.

AUGUST 29, 1879.

*Ordered,* That all papers connected with claims of any character against the District, and requiring authentication by a notary public or justice of the peace, must be authenticated by or before officers having no connection with the claimant's side of the case.

SEPTEMBER 4, 1879.

*Ordered,* That all cases of special improvements made by the late board of public works, whether under an ordinance of the corporation of Washington or an act of the District legislature, are within the purview of the thirty-seventh section of the act of February 21, 1871, and one-third of the just cost thereof shall be assessed on the adjoining property and no more.

2. That all assessments for special improvements made by said board of public works are proper subjects for revision under the act of June 27, 1879.

3. That the special assessments along the canal road are hereby annulled; the improvement being of no special value to the adjoining property.

4. That on the Columbia road the special assessments are hereby

reduced to one-third, and upon the Seventh street road and Fourteenth street road to one-fourth of the original assessments.

SEPTEMBER 9, 1879.

*Ordered.* That in cases where the improvement of streets and avenues was commenced under the corporation government and completed under the board of public works, so that the special assessment for such improvement comes within the purview of the act of Congress, entitled "An act to provide a government for the District of Columbia," approved February 21, 1871, and the act of the District legislature, entitled "An act prescribing the mode of assessment for special improvements, and providing for the collection thereof," approved August 10, 1871; and where the street or avenue has been again improved by the board of public works, so that a new assessment for additional work is laid upon the same property, the drawback for old material will not be allowed, but the drawback for two-thirds of the first assessment will be in full for all credits due on account of the first assessment, and the re-use of the old material originally put down thereon.

2. Where the drawback in such cases for old material has not been paid it will be cancelled in the revision of the later assessment; and where such drawback has been paid it will be debited in the revision of the earlier assessment, which reduces that assessment to one-third of the original amount.

SEPTEMBER 22, 1879.

TO ENGINEER COMMISSIONER, D. C.:

SIR: I am directed to notify you that the collector of the District of Columbia has been requested to return to you the H. D. Cooke assessments, noting on them the amount paid by each lot. The drawback certificates will then be issued, as in the case of other revisions based on that statement.

SEPTEMBER 23, 1879.

*Ordered.* That the assessment for the improvement of Water street, in Georgetown, under an extension of contract No. 765 with George Neitzey, be reduced to the cost of relaying the former cobblestone pavement and grading.

OCTOBER 10, 1879.

*Modification of rates for old material.*

Curb 3½ inches and under, 15 cents per linear foot; cobblestones, 25 cents per square yard; gutter-flag, 15 cents per linear foot; and that these rates for old materials be applied uniformly in Washington and Georgetown.

OCTOBER 4, 1879.

The foregoing statement has been prepared under my supervision and is correct.

WM. OSCAR ROOME,

*Clerk in charge Revision Special Assessments.*

WASHINGTON, D. C., October 17, 1879.

## APPENDIX P 8.—REVISION OF SPECIAL ASSESSMENTS OF STREETS AND AVENUES.

Table showing revised assessments of streets in the District of Columbia.

Number.	Date.	By whom assessed.	Street or avenue.	From—	To—	Amount of original assessment.	Net amt of revised assessment.	Difference.
439	Jan. 21, 1874	Board of public works.	Tenth street west	F street north.	N street north.	\$55,556 47	\$59,221 31	\$3,325 16
440	Feb. 26, 1873	do	Eleventh street west.	do	O street north.	22,905 13	19,639 02	2,965 51
441	Feb. 26, 1873	do	Fourteenth street west.	N street north.	Boundary street.	75,771 82	60,578 28	12,193 54
442	Feb. 28, 1873	do	Eight street east.	Pennsylvania avenue.	Navy Yard.	19,644 51	20,231 39	586 88
443	Mar. 31, 1873	do	Gay street (Georgetown).	Washington street.	Monterey street.	2,943 29	1,872 85	1,069 54
444	Mar. 31, 1873	do	Oliver street (Georgetown).	Bridge street.	do	2,259 89	2,119 36	140 53
445	Mar. 31, 1873	do	Green street (Georgetown).	Green street.	West street.	10,618 50	7,710 12	2,908 38
446	Mar. 31, 1873	do	Washington street (Georgetown).	Green street.	Monroe street.	4,973 20	5,005 96	32 76
447	Apr. 1, 1873	do	Eleventh street west.	Pennsylvania avenue.	Canal.	6,682 87	7,399 58	716 71
448	Apr. 1, 1873	do	Ninth street west.	do	B street north.	2,831 97	2,568 07	263 90
449	Apr. 3, 1873	do	Twelfth street west.	B street north.	Ohio avenue.	(1)	(1)	0
450	Apr. 3, 1873	do	Pennsylvania avenue.	First street east.	Eight street east.	52,698 59	41,997 97	11,022 62
451	Apr. 25, 1873	do	New York avenue.	Seventh street west.	North Capitol street.	33,543 96	33,543 96	0
452	Sept. 29, 1873	do	Eight street west.	G street north.	O street north.	40,108 34	31,165 81	9,942 53
453	Oct. 6, 1873	do	Twentieth street west.	Twentieth street west.	Twenty-seventh street west.	20,827 33	16,852 76	3,974 57
454	Oct. 6, 1873	do	Pierce Place.	Twentieth street west.	Sixth street west.	4,485 23	4,034 00	451 23
455	Oct. 6, 1873	do	Missouri avenue.	Twentieth street west.	Fourth street west.	4,445 62	3,501 46	944 16
456	Oct. 6, 1873	do	Third street west.	Fourth street west.	D street north.	18,416 69	11,410 33	7,005 76
457	Oct. 7, 1873	do	P street north.	Fourth street west.	New Jersey avenue.	10,231 61	7,764 16	2,467 48
458	Oct. 7, 1873	do	P street north.	Second street west.	Fourth street west.	11,059 77	6,319 13	742 32
459	Oct. 7, 1873	do	E street north.	New Jersey avenue.	Fourth street west.	7,291 15	10,325 22	734 55
460	Oct. 7, 1873	do	H street north.	Eighteenth street west.	Twentieth street west.	12,378 83	16,694 88	3,283 95
461	Oct. 8, 1873	do	E street north.	Eighteenth street west.	Fifteenth street west.	7,074 76	6,400 40	674 36
462	Oct. 8, 1873	do	G street north.	Ninth street west.	do	26,317 86	15,374 56	11,043 30
463	Oct. 8, 1873	do	C street north.	Ninth street west.	do	4,326 93	3,188 11	1,148 79
464	Oct. 12, 1873	do	Second street west.	Sixth street west.	Pennsylvania avenue.	45,621 28	38,650 26	6,975 12
465	Oct. 13, 1873	do	B street north.	Sixth street west.	Seventh street west.	11,927 65	9,373 65	2,554 01
466	Oct. 15, 1873	do	Sixth street west.	Pennsylvania avenue.	Third street south.	30,732 80	28,468 98	2,263 82
467	Oct. 18, 1873	do	First street west.	Pennsylvania avenue.	Seventh street west.	1,199 00	1,199 00	0
468	Oct. 18, 1873	do	First street west.	Pennsylvania avenue.	Seventh street west.	30,732 80	28,468 98	2,263 82
469	Oct. 18, 1873	do	First street west.	Pennsylvania avenue.	Seventh street west.	30,732 80	28,468 98	2,263 82
470	Oct. 18, 1873	do	First street west.	Pennsylvania avenue.	Seventh street west.	30,732 80	28,468 98	2,263 82
471	Oct. 18, 1873	do	First street west.	Pennsylvania avenue.	Seventh street west.	30,732 80	28,468 98	2,263 82
472	Oct. 18, 1873	do	First street west.	Pennsylvania avenue.	Seventh street west.	30,732 80	28,468 98	2,263 82
473	Oct. 18, 1873	do	First street west.	Pennsylvania avenue.	Seventh street west.	30,732 80	28,468 98	2,263 82
474	Oct. 18, 1873	do	First street west.	Pennsylvania avenue.	Seventh street west.	30,732 80	28,468 98	2,263 82
475	Nov. 25, 1873	do	Squares.	Ninth street west.	Boundary street.	50,300 39	57,296 39	7,000 00
476	Nov. 10, 1873	do	New York avenue.	B street south.	Boundary street.	25,209 25	19,965 75	5,243 50
477	Nov. 29, 1873	do	Eighteenth street west.	B street south.	P street north.	52,224 15	46,027 58	6,196 57
478	Nov. 29, 1873	do	Eighteenth street west.	B street south.	P street north.	50,538 43	41,884 43	8,654 00
479	Dec. 30, 1873	do	Water street (Georgetown).	do	High street.	11,889 17	9,857 23	2,031 94
480	Dec. 30, 1873	do	Water street (Georgetown).	do	High street.	103,047 08	88,066 59	14,980 49
481	Dec. 31, 1873	do	B street north.	Twelfth street west.	Twelfth street west.	3,451 98	3,451 98	0
482	Dec. 31, 1873	do	B street north.	Twelfth street west.	Twelfth street west.	17,736 70	15,251 78	2,485 01

83	Jan. 2, 1874	Second street (Georgetown)	High street	Facette street	14,978 42	9,983 22	4,985 20
84	Jan. 3, 1874	West street (Georgetown)	do	Rock Creek	36,427 97	22,950 50	13,477 47
85	Jan. 3, 1874	Gay street (Georgetown)	do	Washington street	10,323 72	8,199 60	2,124 12
86	Jan. 5, 1874	B street north	Seventh street west	Tenth street west	8,716 17	5,814 79	2,901 38
87	Jan. 5, 1874	Aqueduct street (Georgetown)	Bridge street	Rock Creek	2,652 67	1,028 23	1,624 44
88	Jan. 8, 1874	B street north	Twelfth street west	Fifteenth street west	8,784 66	8,681 71	1,102 95
89	Jan. 5, 1874	Bridge street (Georgetown)	Rock Creek	Market street	39,865 04	19,217 43	20,647 61
90	Jan. 7, 1874	B street south	New Jersey avenue	Second street east	10,101 66	7,910 13	2,191 53
91	Jan. 8, 1874	High street (Georgetown)	Camel	Road street	26,270 65	16,879 96	9,390 69
92	Jan. 17, 1874	Montgomery st. (Georgetown)	Bridge street	West street	9,497 53	5,670 87	3,826 66
93	Jan. 20, 1874	Eighth street west	O street north	Rhode Island avenue	11,635 36	10,379 47	1,255 89
94	Jan. 21, 1874	Twenty-third street west	Circle at Pennsylvania avenue	M street north	5,078 38	4,077 81	1,000 57
95	Jan. 23, 1874	do	do	Virginia avenue	11,473 72	6,913 06	4,560 66
96	do	F street north	Canceled	Canceled	( )	( )	( )
97	Feb. 26, 1874	Tenth street west	F street north	N street north	( )	( )	( )
98	Feb. 7, 1874	Ninth street west	M street north	Boundary street	36,613 46	24,025 96	12,587 50
99	Feb. 28, 1873	Fourteenth street west	N street north	do	( )	( )	( )
45					1,118,914 20	908,744 03	210,170 17

\* Increased.

† Charged in No. 16.

; Charged in No. 43.

The above statement was prepared under my supervision and is correct.

WASHINGTON, D. C., October 17, 1879.

WM. OSCAR ROOME,  
Clerk in Charge of Revision of Special Assessments.

# 412 REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA.

Table showing revised assessments of streets in the District of Columbia—Continued.

Number.	Date.	By whom assessed.	Street or avenue.	From—	To—	Amount of original assessment.	Amount of revised assessment.	Difference.
29	Oct. 5, 1874	Commissioners	Maryland avenue	First street east	Fifteenth street east.	\$25,800 44	\$20,249 22	\$5,551 22
73	Oct. 12, 1874	D. C.	Seventeenth street west	New York avenue	B street north	8,395 12	6,831 52	1,563 60
32	Apr. 21, 1875	do	East and west Market st. Space	Georgetown	do	650 41	409 38	240 43
37	May 1, 1875	do	Twenty-second street west	E street north	M street north	22,636 83	16,922 84	5,713 99
41	Apr. 21, 1875	do	New Jersey avenue	B street north	O street north	61,438 04	42,149 22	19,288 82
53	Sept. 6, 1876	do	Rhode Island avenue	Connecticut avenue	Boundary street	50,062 23	52,097 15	6,035 08
55	May 29, 1876	do	New Hampshire avenue	E street north	Q street north	37,475 27	33,523 25	2,952 02
59	Aug. 6, 1876	do	A street south	Pennsylvania avenue	Second street east	4,012 57	3,176 85	838 52
64	Sept. 6, 1876	do	K street north	North Capitol street	Second street west	43,771 75	36,460 30	9,317 45
66	Sept. 6, 1876	do	Tenth street west	N street north	R street north	17,854 61	11,781 38	6,123 23
70	Sept. 8, 1876	do	Fourth street east	Pennsylvania avenue	Maryland avenue	17,854 61	7,560 74	4,094 56
71	Sept. 23, 1876	do	Maryland avenue	do	do	15,160 67	9,528 24	5,632 43
73	Oct. 5, 1876	do	Fifth street east	First street east	Fifteenth street east.	5,980 14	5,187 97	792 17
74	Oct. 5, 1876	do	M street north	K street north	Boundary street	14,115 53	8,366 22	5,749 31
75	Sept. 28, 1876	do	Thirtieth and a-half st. west	First street east	do	5,030 34	4,327 57	702 77
76	Oct. 5, 1876	do	South Capitol street	B street south	Adams River	2,102 28	1,969 77	141 51
78	Oct. 7, 1876	do	Eleventh street west	M street north	O street north	28,191 94	20,381 37	7,810 57
79	Sept. 5, 1876	do	I street north	New Jersey avenue	Second street west	4,115 16	3,537 73	577 43
80	Sept. 28, 1876	do	R street north	Seventh street west	Boundary street	8,975 82	4,540 26	4,435 56
82	Oct. 5, 1876	do	Eight street west	Rhode Island avenue	New Jersey avenue	6,066 30	6,053 63	12 67
84	Oct. 5, 1876	do	Thirtieth street west	Ninth street west	Boundary street	12,471 67	10,943 52	1,528 15
85	Oct. 5, 1876	do	De Sales street	R street south	Maryland avenue	11,879 40	5,168 14	6,711 26
86	Nov. 13, 1876	do	Eleventh street east	Seventeenth street west	Connecticut avenue	11,793 45	5,738 76	6,054 69
87	Sept. 6, 1876	do	Twenty-fourth street west	Virginia avenue	R street north	20,311 61	11,350 36	8,961 25
88	Oct. 23, 1876	do	Eleventh street east	Pennsylvania avenue	N street north	20,188 21	11,753 65	8,434 55
89	Oct. 5, 1876	do	L street north	Fifth street east	Massachusetts avenue	20,578 72	543 97	8,435 65
90	Oct. 5, 1876	do	New Jersey avenue	Revised with	No. 53, Commissioners	10,955 48	9,043 71	1,911 77
91	Aug. 24, 1876	do	R street north	Fourteenth street west	Seventeenth street west	4,209 26	2,940 59	1,268 67
92	Oct. 5, 1876	do	Delaware avenue	C street north	Massachusetts avenue	3,206 95	2,627 18	579 77
93	Oct. 5, 1876	do	Ninth street east	H street north	K street north	16,069 88	13,936 52	2,133 36
96	Dec. 6, 1876	do	Third street east	Pennsylvania avenue	Potomac River	5,812 30	3,821 24	1,991 06
253	Feb. 26, 1877	do	N street north	Fifth street west	New Jersey avenue	( )	( )	( )
97	Nov. 13, 1876	do	New Jersey avenue	E street south	Canal	9,122 83	7,945 28	1,177 55
98	Dec. 7, 1876	do	G street north	Seventh street east	Maryland avenue	13,518 92	12,516 37	1,002 65
99	Nov. 17, 1876	do	Sixth street east	Pennsylvania avenue	H street north			
100	Nov. 13, 1876	do						

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101	Nov. 14, 1876	do	O street north	New Jersey avenue	Thirteenth street west	7,294 77
102	Nov. 13, 1876	do	Sixth street east	K street north	Boundary street	3,463 42
103	Nov. 17, 1876	do	K street north	Third street east	Boundary street	3,862 19
104	Nov. 7, 1876	do	S seventh street east	North Carolina avenue	Boundary street	2,571 47
105	Nov. 17, 1876	do	F street north	Seventh street east	Boundary street	26,111 14
106	Nov. 17, 1876	do	T twenty-fifth street west	Seventh street east	Maryland avenue	4,713 94
107	Dec. 30, 1876	do	Boundary street	Pennsylvania avenue	K street north	4,982 46
108	Oct. 5, 1876	do	M street south	Sixth street east	Ninth street east	3,313 43
109	Dec. 26, 1876	do	Boundary street	Fourth street east	Fourth-and-a-half street west	11,676 22
110	Jan. 18, 1877	do	F street north	C street north	Massachusetts avenue	3,709 41
111	Jan. 8, 1877	do	E street north	Twenty-second street west	Massachusetts avenue	1,463 30
112	Jan. 16, 1877	do	E street north	Maryland avenue	Massachusetts avenue	8,329 05
113	Jan. 16, 1877	do	Bridge street (Georgetown)	Market street	Langan street	6,089 07
114	Jan. 27, 1877	do	Ninth street east	Revised with	No. 94, Commissioners	8,013 40
115	Nov. 17, 1876	do	Boundary street	Sixth street west	Ninth street west	6,455 01
116	Sept. 6, 1876	do	Water street south	do	At Lee's wharf	2,320 14
117	Feb. 6, 1877	do	Twenty-seventh street west	G street north	K street north	2,438 58
118	Feb. 6, 1877	do	B street north	Sixth street west	Seventh street west	1,499 05
119	Dec. 6, 1876	do	Third street east	Revised with	No. 96, Commissioners	( )
120	Dec. 6, 1876	do	C street north	First street east	Third street west	(*)
121	Mar. 2, 1877	do	Seventeenth street west	M to Q street and	R to S street	22,019 48
122	Feb. 19, 1877	do	Massachusetts avenue	Revised with	No. 73, Board of Public Works	10,177 24
123	Feb. 14, 1877	do				(*)
124						(*)
125						(*)
126						(*)
127						(*)
128						(*)
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\* Increased.

† See 53.

‡ All United States.

§ See 94.

|| Consolidated with 94.

¶ Consolidated with 96.

The above statement was prepared under my supervision and is correct.

WASHINGTON, D. C., October 17, 1879.

WM. OSCAR ROOME,  
Clerk in Charge Revision of Special Assessments.

*Statement of amounts charged United States in the revision of Public Works assessments.*

[illegible]



# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 415

22	F st. n. from 17th to 23d st. w.	518 00	300 00	511 00	3,115 00	285 00	4,729 00
23	I st. n. from 15th to 17th st. w.		249 08		3,500 00		3,749 08
24	15th st. w. from N. Y. ave. to K st.		323 76		4,083 20		4,406 96
25	16th st. w. from H st. n. to Bondly.	508 80	1,491 32	228 57	7,210 12		9,438 81
26	East Capitol st. from 1st to 11 st. e.						
27	17th st. w. from N. Y. ave. to N st. n.		528 10		5,225 00		5,753 10
28	West side Farragut sq.		530 02		4,226 65		4,756 67
29	War and Navy Departments.	1,475 00	1,717 00		8,519 07	1,763 89	13,759 96
30	Water st. from 7th w. to 12th st. w.						
31	G st. n. from 7th w. to 15th w.				7,332 50		7,332 50
32	13th st. w. from F st. n. to N st. and Pa. ave. to canal.				5,216 00		5,216 00
33	44 st. w. from Mo. ave. to P st. s.		172 50	124 00	2,730 00		3,026 50
34	M st. n. from N. H. ave. to Rock Ck		1,693 20	4,240 80	7,057 50		12,991 50
35	I st. n. from 18th to 21st st. w.				1,977 00		1,977 00
36	G st. n. from 7th st. w. to N. J. ave		1,277 30	1,310 85	9,571 23		12,159 38
37	E st. n. from 7th st. w. to 13th st. w	825 74	99 00		3,235 20		5,823 14
38	12th st. w. from F to P st. n.		224 36	235 00	1,986 60		2,445 96
39	H st. n. from 7th to 13th st. w						
40	Consolidated with Commissioners' assessment 307.						
41	8th st. w. from C st. n. to F st. n.	825 74	99 00		3,235 20		5,823 14
42	Consolidated with Commissioners' assessment 307.						
43	10th st. w. from F to N st. n.						
44	Consolidated with government assessment 79.						
45	14th st. w. bet N st. and Boundary				1,414 00		1,414 00
46	8th st. bet Pa. ave. and Navy Yd.				2,107 00		2,107 00
47	K st. from Washington to Montgomery st. Georgetown.	459 54	3,370 00	3,614 00	10,377 55	3,581 40	21,402 49
48	O st. ave. from Washington to Montgomery st. Georgetown.						
49	Green st. from Bridge to Washington st. Georgetown.						
50	Dabarton st. from Green to Monroe st. Georgetown.						
51	15th st. from Pa. ave. to Canal.	6,591 17	2,055 00	1,900 00	23,135 00	1,040 00	34,781 17
52	9th st. w. from Pa. ave. to B st. n.	113 75	338 16	520 75	4,246 00		5,218 66
53	12th st. w. from B st. to Ohio ave						



71	B st. n. from 1st to 3d st. w.	Res. at 6th and Water st.	457 95	4,230 17	4,688 12
72	1st st. w. from Pa. ave. to I st. n.	Res. bet. Pa. ave. and B st.	916 26	8,551 66	9,682 92
73	Consolidation Commissioners' assessment No. 377.				
74	Scott's statute, consolidation Commissioners' assessment No. 377.				
75	19th st. w. from N. Y. ave. to Boundary.	Res. bet. H st. and Pa. ave.	229 50	3,442 05	3,830 44
76	N. J. ave. from B to E st. s.	Res. bet. E st. n. and E st. s.	266 25	2,921 34	3,870 09
77	18th st. w. from E to P st. n.	Res. bet. Pa. ave. and H st.	331 46	1,309 63	2,108 30
78	20th st. w. from E to R st. n.	Res. bet. Pa. ave. and I st.	199 30	2,100 00	2,535 39
		Res. bet. P st. and Mass. ave.	177 50	1,232 58	2,246 58
		Res. at O st.		3,750 02	3,750 02
		Res. bet. Q and R sts.	340 80	3,034 06	3,375 46
79	Water st. from K st. bridge to High st.				
80	L st. n. from N. J. ave. to 26th st.	Res. bet. 5th and 6th sts.	371 63	2,592 59	3,425 72
		Res. bet. 10th and 12th sts.	1,588 89	5,392 50	8,297 57
	Columbia Hospital, sq. 25				
		Res. bet. 26th st. and Pa. ave.	681 39	5,166 00	8,193 60
			721 42	2,266 25	3,506 86
81	B st. n. from 10th to 12th st. w.		3,700 67	10,450 58	17,529 91
82	B st. s. from 6th to 14th st. w.	Res. at Va. ave. w. of 12th st.	1,096 71	671 80	2,349 53
		Res. bet. 11th and 12th sts. s. side.	644 62	530 85	2,430 49
		Res. bet. 6th and 14th sts. n. side.	20,125 48	37,767 92	70,297 89
83	2d st. from High to Fayette st.		505 23	24 12	
84	West st. from High to Rock Creek				
85	Gay st. from High to Washington				
86	B st. n. from 7th to 10th st. w.	Res. bet. 7th and 13th sts. s. side B. n. side bet. 10th and 12th sts.	2,442 27	59,838 80	95,057 03
87	Aqueduct st. from Bridgeto Rock Creek.	Res. bet. Rock Creek and Montgomery st.	7,187 25	1,042 50	7,410 78
			330 00		2,537 50

Statement of amounts charged United States in the revision of Board of Public Works assessments—Continued.

Assessment number.	Limits.	Reservations.	Grading.	Curbing.	Sidewalks.		Carriage-way.	Parking.	Sewer.	Iron fence.	Coping.	Trees.	Superintendent.	Total amount.
					Brick pavement.	Flagging.								
87	Aqueduct st. from Bridge to Rock Creek.	Res. at intersection of Bridge street, Georgetown.		\$517 62	\$771 67		\$2,672 23							\$3,964 52
88	B st. n. from 12th to 15th st. w., charged United States in the revision of Board of Public Works assessment No. 1.													
89	Bridge st. from Rock Creek to M st. Georgetown.	Res. Aqueduct st.	\$333 23	175 82			2,450 00							2,959 15
90	B st. s. from N. J. ave. to 2d st. e.		3,339 90	1,495 15	1,237 77	\$14,312 50	10,909 78	\$678 00				\$113 33		31,845 10
91	High st. from Canal to Road st.	Reservoir res.	809 26	1,136 22	962 67	1,616 76								4,577 64
92	Montgomery st. from Bridge to West st.													
93	8th st. w. from O st. n. to R. I. ave.													
94	23d st. w. from Circle to M st.													
95	23d st. from Va. ave. to Circle													
96	F st. canceled, F to M st. n.													
97	10th st. w. from F to M st. n.						1,449 11							1,859 51
98	20th st. w. from M st. n. to Boundary.	Res. bet. Q st. and R. I. ave.		176 08	234 32									
99	14th st. w. from N st. to Boundary.													
	Total		125,435 48	86,670 96	74,367 78	34,477 70	751,728 69	17,489 74	\$10,737 02	6,733 20		4,935 95	2,743 67	1,121,380 19

The above statement was prepared under my supervision and is correct.

WM. OSCAR ROOME,  
Clerk in Charge Revision of Special Assessments.

WASHINGTON, D. C., October 17, 1879.

## Statement of amounts charged United States in the revision of Commissioners' assessments.

Assessment number.	Limits.	Reservations.	Grading.	Curbing.	Sidewalks.		Carriage-way.	Parking.	Sewer.	Iron fence.	Coping.	Trees.	Superintendent.	Total amount.
					Brick pavement.	Flagging.								
1	C st. n. from 2d to 4½ st. w.													
2	I st. n. from 13th to 15th st. w.			\$924 00			\$9,222 50							\$10,146 50
3	Riggs bet. 13th and 14th sts. w.													
4	14th st. from F to H st. n.													
5	N st. from 5th to 16th st. w.													
6	11th st. s.e. from Pa. ave. to Eastern Branch.													
7	McC. ave. from 3d to 6th st. w.		\$3,698 61	2,292 23	\$1,940 78		2,963 85							10,895 47
8	13½ st. w. from Pa. ave. to B st. n.													
9	11th st. w. from Pa. ave. to B st. n.		687 40	236 40	218 00		3,022 50							4,764 30
10	13th st. w. from Pa. ave. to F st. n.													
11	E st. n. from 5th to 7th w.													
12	Vt. ave. from 14th and M st. cir. to 13th and P st. cir.		581 89				2,909 45							3,491 34
13	M-street circle.		776 84				3,884 20							4,601 04
14	Pa. ave., chg. U. S. res.						1,745 83							1,745 83
15	F sw. from 7th to Water st.													
16	Del. ave. from B to C st. n.													
17	H st. n. from 4th to 1st e.	Res. and Government Print. Office.		493 50	711 60		1,830 00		\$1,395 90					4,431 00
18	26th st. w. from K to M st. n.	Reservation												
19	Col. st. from O to Q st. n.						1,695 76							1,695 76
20	2d st. e. from Md. to N C ave.	Reservation	1,645 00											
21	S C ave. from 6th to 7th st. e.						2,756 25	\$54 00						4,455 25
22	S st. n. from 14th to 16th st. e.													
23	E st. n. from 13th to 14th st. w.	Reservation		915 36	300 00		8,118 00							9,333 36
24	H st. n. from 15th st. to Vt. ave.													
25	C st. s. from 3d to 4th st. e.													
26	N st. s. from 6th to 7th st. e. Creek Canal.													
27	B st. n. from Del. ave. to 1st st. e.		2,095 72	1,196 24			11,026 87	\$13,075 25						27,394 08
28	Union st. from M to O st. sw.													

\* Part flag.

## Statement of amounts charged United States in the revision of Commissioners' assessments—Continued.

Assessment number.	Limits.	Reservations.	Grading.	Curbing.	Sidewalks.		Carriage-way.	Parking.	Sewer.	Iron fence.	Coping.	Trees.	Superintendent.	Total amount.
72	Md. ave. from 1st to 15th st. e.													
235	F st. n. from 6th to 15th st. w.		\$15,222 67	\$490 60			\$3,225 60	\$8,897 90		\$785 00				\$8,621 77
30	Md. ave. from 1st to 3d st. w.	Reservation	2,086 05	2,074 33			1,632 62	20,189 89	\$826 71		\$1,613 85			28,423 45
31	17th st. w. from N. Y. ave. to B st. n.	do	19,321 17				23,215 00		1,650 29					44,186 46
32	Corcoran st. from 13th to 14th st. w.													
34	G st. from High to Potomac st. Georgetown.													
35	Market st. from 1st to 3d st. Georgetown.													
36	Prospect st. from High to Market st. Georgetown.													
37	East and West Market Space, Georgetown.													
38	1st st. from High to Fayette st. Georgetown.													
39	P st. n. from N. J. ave. to Rock Creek.			150 84	\$242 00			1,333 75	\$148 00					1,874 59
40	Q st. n. from 14th to 16th st. w.	Res. at 20th st.		182 40				1,927 50						2,109 90
41	22d st. w. from E to M st. n.	Res. at K st.		120 00	85 00			518 53	53 50					776 03
42	6th st. w. from La. ave. to G st. n.	Res. at Va. ave. n.w. Reservation						626 00						626 00
43	F st. se. from 4th to 7th st. w.							1,890 90						1,890 90
44	6th st. from N. J. ave. to B st. n.													
45	H st. n. from 1st to 15th st. e.	Reservation	4,544 93	132 30	136 00			840 50						1,108 80
46	A st. n. from 1st to 2d st. w.		22,181 60	403 28	297 00			3,078 90	186 00					8,510 11
47	7th st. w. from B to Q st. n.	Res. K st. and La. ave.		170 40	147 00			13,107 50	457 66					42,314 46
48	5th st. w. from G to O st. n.							11,835 00						12,152 40
49	G st. n. from 4th to Water st. w.													
50	Potomac st. from Bridge to 2d st. Georgetown.													
51	Congress st. from Bridge to West st. Georgetown.	Reservation		171 82	161 33			1,109 16	200 15					1,702 46



Statement of amounts charged United States in the revision of Commissioners' assessments—Continued.

Assessment number.	Limits.	Reservations.	Grading.	Curbing.	Sidewalks. Brick pavement.	Flagger.	Carriage-way.	Parking.	Sewer.	Iron fence.	Coping.	Trees.	Superintendent.	Total amount.
80	E st. n. from N. J. ave. to 2d st. w.													
81	I st. n. from 7th to Boundary st. e.													
82	R st. n. from 9th st. to N. J. ave. w.	Res. at 7th st. Res. at 6th st. w.	\$126 00 289 40				\$611 11 386 22							\$737 11 901 02
83	E st. n. from 9th to 14th st. w.				\$226 00									
84	8th st. w. from R. I. ave. to Boundary.													
85	13th st. w. from E st. s. to Md. ave.													
86	De Sales st. from 17th st. to 19th st. w.													
87	11th st. w. from O to R st. n.													
88	24th st. w. from Va. ave. to N. st. n.	National Observatory and U. S. Res. N. H. ave. and I st.	\$1,166 67 2,800 00	218 08 248 00	325 00 234 00		\$197 40 499 70	\$94 50 93 00		\$72 00 30 40				325 00 1,982 65 3,888 10
89	11th st. from Pa. ave to Mass. ave.	Res. Columb. Hosp. Res. Lincoln Square	3,166 78 464 62	312 00 512 54	347 00 512 64		679 70 2,993 53	\$340 00				\$64 00		5,045 48 4,547 33
90	L st. n. from 5th to 6th st. e.													
91	Consolidated with No. 53.													
92	R st. n. from 14th to 17th st. w.													
93	Del. ave. from C st. n. to Mass. ave.													
94	9th st. e. from H to K st. and } H st. to Md. ave.			120 00	166 66		409 34							696 00
95	6th st. e. from Pa. ave. to K st. s.													
96	3d st. e. from Pa. ave. to Va. } ave. and Va. ave. to River }	Providence Hosp. Res. 17	1,861 68 4,378 74				2,191 10 3,992 70							3,982 78 10,560 60
97	N st. n. from 5th st. to N. J. ave.			1,001 10	928 00									
98	N J ave. from E st. s. to Canal													
99	G st. n. from 7th st. e. to Md. ave.	Res. 17	3,777 79	2,965 10	3,532 04		26,338 25	171 00	3,501 98					40,306 16
100	6th st. e. from Pa. ave. to H st. n.	Lot 12, square 836.	476 00	137 80	141 12		103 50	15 00						873 42





Statement of amounts charged United States in the revision of Commissioners' assessments—Continued.

Assessment number.	Limits.	Reservations.	Grading.	Sidewalks.		Curbing.	Curbings-way.	Parking.	Sewer.	Iron fence.	Coping.	Trees.	Superintendent.	Total amount.
				Brick pavement	Flagging.									
377 733	Mass. ave. bet. N. J. ave. and Boundary.	Scott Statue 14th street circle Res. bet. 11th and 12th sts. Res. bet. 10th and 11th sts. Res. at 5th st. Res. at 3d, 4th, and H sts. Res. at M st., east 14th st. circle. Res. at M st., west 14th st. circle. Res. at 7th street. Res. at 21st st. and Boundary.	\$12,763 20 2,948 00 2,948 00 ..... ..... 1,603 60 325 60 734 80 ..... ..... .....	\$5,116 50 1,150 00 1,150 00 1,158 50 1,464 50 425 50 287 50 330 00 1,300 30 .....	\$1,129 00 370 00 951 00 ..... ..... 951 00 768 00 1,009 00 ..... ..... 334 80 167 00 872 45	\$89,654 40 ..... 14,070 00 ..... 14,070 00 9,187 50 14,388 50 4,847 50 3,714 00 1,932 00 7,655 49	\$89 58 ..... ..... ..... ..... 3,642 50 1,104 50 446 50 ..... 349 60 .....	\$11,092 00 954 10 954 10 ..... ..... ..... ..... ..... ..... ..... ..... .....	..... ..... ..... ..... ..... ..... ..... ..... ..... ..... .....	..... ..... ..... ..... ..... ..... ..... ..... ..... ..... .....	..... ..... ..... ..... ..... ..... ..... ..... ..... ..... .....	..... ..... ..... ..... ..... ..... ..... ..... ..... ..... .....	..... ..... ..... ..... ..... ..... ..... ..... ..... ..... .....	\$69,746 10 459 58 20,073 10 ..... 20,073 10 ..... 11,114 00 22,108 10 ..... 6,703 10 5,517 60 2,429 00 10,183 84 .....
	Total	.....	205,182 01	60,019 67	66,186 33	28,708 52	511,248 26	16,902 19	216,158 90	28,709 33	1,709 85	579 00	698 00	1,136,102 66

The above statement was prepared under my supervision, and is correct.

WASHINGTON, D. C., October 17, 1879.

WM. OSCAR ROOME,  
Clerk in Charge Revision of Special Assessments.

*Amount of work charged to the United States in assessments not yet revised.*

Sixth street east, between Pennsylvania avenue and K street south	\$8,676 50
New Jersey avenue, E street south to canal	40,306 16
K street north, Pennsylvania avenue to Rock Creek, west	3,293 34
Q street north, New Jersey avenue to First street west	6,380 41
N street south, from James Creek Canal to Third street east	5,600 00
S street north, from Fourteenth to boundary	4,697 48
First street east, C street south to F street south	13,047 70
Massachusetts avenue, New Jersey avenue, to Eleventh street east	48,475 90
K street south, between James Creek Canal and Four-and-a-half street south	500 00
Tenth street east, between East Capitol street and I street south	712 00
G street north, between Twenty-second street and river	43,607 12
H street north, between Twenty-second street and river	4,492 00
Virginia avenue, between Seventeenth street and Rock Creek	58,576 82
Nineteenth street east, between B and E streets south	5,557 38
P street south, between Four-and-a-half street and Potomac River	739 64
I street south, between Sixth and Eighth streets east	1,412 70
South Carolina avenue, between New Jersey avenue and Eighth street east	30,394 86
C street north, between Sixth and Tenth streets east	720 00
T street north, between Vermont avenue and Boundary	1,440 00
O street south, between Four-and-a-half street and river	253 40
North Carolina avenue, between New Jersey avenue and Eleventh street east	49,663 23
Tenth street west, between D and Water streets	1,032 30
Twelfth street west, between P street and Q street north	1,721 78
Vermont avenue, between P street circle and Q street north	2,296 62
Ohio avenue, between Twelfth street and Fifteenth street west	18,242 54
Fourteenth street west, between B street north and B street south	77,910 71
Seventh street west, between B street north and B street south	59,219 43
Fourteenth street west, between B street north and Ohio avenue	3,152 00
South Capitol street, between G street south and K street south	1,096 65
Armory Square reservation, between Four-and-a-half street and Sixth street west	2,031 00
Eighth street east, between East Capitol street and I street	1,090 00
Fifth street west, between D street north and G street north	2,990 04
Eleventh street west, between B street south and Water street	7,236 00
Fourteenth street east, between B street south and boundary	7,857 50
D street south, between New Jersey avenue and Seventh street east	21,200 00
C street north, between Fourth street and Fifth street east	2,195 91
Nineteenth street west, between E street north and canal	640 00
Virginia avenue, between D street south and Four-and-a-half street west	1,546 03
New Hampshire avenue, between S street and boundary	486 00
M street south, between Sixth street and Eighth street east	2,173 62
I street north, between Fourth street and Fifth street west	933 49
Seventh street east, between Pennsylvania avenue and M street	10,981 42
B street south, between First street and Maryland avenue	12,119 22
New York avenue, between Seventeenth street and Twenty-third street west	27,492 98
E street north, between North Capitol street and First street east	275 40
Eleventh street east, between A street north and H street north	1,001 50
I street north, between New Jersey avenue and North Capitol street	1,190 00
Twenty-fifth street west, between L street and M street north	6,712 08
D street south, between Seventh street and Eighth street east	2,852 72
South Capitol street, between B street south and C street south	4,070 22
Eighth Street east, between C street south and D street south	1,160 80
Third street west, between Maryland avenue and D street south	3,807 96
A street south, between Third street and Ninth street east	100 00
Thirteenth street north, between N street and Q street north	82,371 87
Q street north, between Sixteenth street west and boundary	3,971 68
Tenth street east, between Pennsylvania avenue and North Carolina avenue	1,137 60
Tenth street west, between E street and F street north	3,522 35
Twenty-third street west, between Virginia avenue and Potomac River	8,997 11
Fourth street east, between Maryland avenue and Boundary street	2,400 00
Pennsylvania avenue, between Eighth and Eleventh streets east	35,106 52
Twentieth street west, between Virginia avenue and E street	100 00
Twenty-fifth street west, between G street and Potomac River	9,320 00

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M street north, between New York avenue and First street west.....	\$5, 129 92
Third street east, between Maryland avenue and E street north.....	2, 036 00
E street north, between Seventeenth street and Potomac River.....	41, 947 27
Fourth street east, between North Carolina avenue and river.....	17, 750 00
Second street west, between Missouri avenue and B street south.....	3, 594 14
C street north, between First street west and Third street east.....	8, 158 40
Twelfth street west, between B street north and B street south.....	78, 594 23
B street south, Second street to Sixth street east and Eleventh and Twelfth streets east.....	3, 944 40
Twenty-sixth street north, between K street and Water street.....	2, 470 00
B street north, between First street and Fourth street east.....	11, 300 00
E street south, between First street and Sixth street east.....	11, 840 00
D street north, between New Jersey avenue and Third street east.....	3, 020 00
Second street east, between Maryland avenue and G street north.....	3, 101 00
Fourth street west, between New York avenue and O street north.....	3, 176 70
Seventeenth street west, between M street and S street north.....	1, 435 00
D street south, Four-and-a-half street to Fourteenth street west.....	1c, 378 02
S street north, Sixteenth street to Boundary street.....	810 00
Second street east, North Carolina avenue to Virginia avenue.....	3, 668 00
Connecticut avenue, H street to Boundary street.....	19, 105 83
Ninth street west, between Maryland avenue and C street south.....	1, 388 79
Ninth street west, between Maryland avenue and D street south.....	4, 842 99
P street circle at Nineteenth street and Connecticut avenue.....	11, 910 27
Pennsylvania avenue at int. Tenth street west.....	800 64
Pennsylvania avenue at int. Tenth street east.....	316 27
Sixth street east, between M street south and Eastern Branch.....	16, 613 30
P street north, Third street to Seventh street west.....	5-6 50
B street north, between Fourth street east and Eleventh street east....	3, 047 00
Seventh street road.....	33, 513 15
Columbia turnpike.....	10, 158 59
Total.....	1, 085, 226 10

The above statement was prepared under my supervision, and is correct.

WM. OSCAR ROOME,

*Clerk in Charge Revision of Special Assessments.*

WASHINGTON, D. C., October 17, 1879.

*Statement of Drawbacks.*

Amount of credits received from Mr. G. W. Beall, clerk in charge of special assessments.....	\$442, 385 78
Amount of drawbacks issued to date (4,362 certificates), aggregating....	256, 533 80
Balance on hand awaiting claimants.....	185, 851 98

Number of powers of attorney, &c., filed in this office since July 20, 1879, 4,580.

The drawbacks due upon the "H. D. Cooke" assessments are not yet ready for issue.

The above statement was prepared under my supervision, and is correct.

WM. OSCAR ROOME,

*Clerk in Charge of Revision of Special Assessments.*

WASHINGTON, D. C., October 17, 1879.

APPENDIX P 9.  
TABLE A.—*Sewer and miscellaneous work from July 1, 1873, to June 30, 1879.*

No. of con- tract.	Date.	Name of contract- or.	Locality.			Description of work.	Cost to June 30, 1879.	Remarks.
			Street.	From—	To—			
52	1877. May 10	L. F. Wright.....	Various streets and ave- nues.			Sweeping and cleaning streets in Washington and Georgetown.	\$23, 875 00	
92	1878. Apr. 17	John H. Fowler....				Sweeping and cleaning alleys in Washington and Georgetown.	4, 800 00	Complete.
94	May 18	B. J. Coyle and Jas. Reynolds.	Fourteenth street west..	Pennsylvania ave- nue north.	H street north....	Reconstruct 412 feet, more or less, of 2-ring brick barrel-sewer, 4½ feet inside diameter, upon a hy- draulic cement concrete founda- tion.	3, 589 15	Do.
96	June 19	Edwin N. Gray and George E. Noyes.				Construct a stand-pipe on the crest of Meridian Hill, in or near the extension of Sixteenth street. Furnish and put up one Blake compound duplex pump with the necessary pipes. Plastering work to finish two sec- tions of the new work-house.	20, 123 04	Do.
97	Aug. 7	Washington Men- denhall.	New work-house....			Painting, &c.....	.....	Do.
98	Sept. 6	W. E. Spalding and George W. Bonnell.	do.....				.....	Do.
99	Aug. 8	J. G. Naylor.....	do.....			Carpenter work.....	.....	Do.
100	Aug. 8	John Burns and Geo. L. Benner.	do.....			Stone work.....	.....	Do.
101	Aug. 14	Charles White, Robert White, and Geo. White.	do.....			Iron work.....	.....	Do.
102	Aug. 8	L. W. Gurnand....	First street east....	C street south....	D street south....	Furnish wood and coal. Construct a 2-ring brick barrel- sewer, 24-inch inside diameter, with four manholes complete.	726 77	Do. Do.
103	Aug. 13	James Gannon....				Collection of dead animals and garbage.	.....	
105	Aug. 23	John McCauley....				Take up and remove 350 feet, more or less, of the arch of the main Tiber sewer, within the limits of the Botanical Gardens.	382 36	Do.
106	Aug. 26	Joseph Williams..	Botanical Gardens....			Construct a 2-ring brick barrel- sewer, 36-inch inside diameter, with twelve manholes.	.....	
107	Aug. 26	Henry Himber....	Eighth street east....	Maryland avenue....	Massachusetts avenue.		.....	

TABLE A.—*Sewer and miscellaneous work from July 1, 1878, to June 30, 1879—Continued.*

No. of con- tract.	Date.	Name of contract- or.	Locality.		To—	Description of work.	Cost to June 30, 1879.	Remarks.
			Street.	From—				
	1878, Aug. 26	Henry Himber....	Massachusetts avenue...	Eighth street east.	Tenth street east.	Construct a 2-ring brick barrel- sewer, 24-inch inside diameter, on the north side, with seven manholes complete.	\$4,514 10	Complete.
			.....do.....	Tenth street east.	Eleventh street east.	Lay 15-inch pipe sewer on north side, with three manholes.	.....	
108	Aug. 30	J. G. Stafford .....	N street north .....	Fourteenth street west.	Vermont avenue .....	Construct a 2-ring brick barrel- sewer, 24-inch and 30-inch in- side diameter, south side, with three manholes, and connect four sewer-traps with 15-inch sewer-pipe, complete.	529 16	Do.
109	Sept. 5	H. I. Gregory .....	New work-house.....	.....	.....	Erect and set up in brick work one Gold's cast-iron heating furnace, and in the new work- house.	.....	Do.
110	Sept. 7	Henry Himber....	U street north .....	Sixteenth street west.	Seventeenth street west.	Construct a brick pump-house...	4,928 32	
112	Sept. 28	T. A. Brown .....	Western market .....	.....	.....	Paint roof .....	228 42	Do.
115	Oct. 21	J. G. Naylor .....	New police court .....	.....	.....	Repair building for police court.	.....	Do.
118	Oct. 17	John H. Howlett ..	North Capitol street ..	.....	.....	Construct truck-house upon lot 7 square 685, fronting on North Capitol street.	.....	Do.
119	Oct. 19	Thomas Lewis.....	Market-house, George- town.	.....	.....	Repair Georgetown market-house	.....	Do.
120	Oct. 21	J. G. Naylor .....	New Hampshire avenue	.....	.....	Construct a truck-house upon lot 12, square 72.	.....	Do.
123	Oct. 23	Samuel H. Kahney, agent Clapp & Jones Mena- facturing Com- pany, Hudson, N. Y.	.....	.....	.....	Furnish two steam fire-engines ..	.....	Do.
128	Nov. 2	John & James Mc- Dermott.....	.....	.....	.....	Furnish two two-horse hose-car- riages.	.....	Do.
130	Nov. 9	H. I. Gregory .....	Eighth precinct station- house.	.....	.....	Furnish and set up one 40-inch Harscow's dome portable fur- nace.	.....	Do.
132	Nov. 9	.....do.....	Old almshouse .....	.....	.....	Furnish and set up two Har- scow's dome hot-air furnaces.	.....	Do.

134	Nov. 19	Smith Petit and James Dripps.	New work-house.....	Construct a tubular boiler and place same in position.	Do.
135	Nov. 25	C. A. Schneider, John A., and Charles F. Schneider.	do .....	Construct two corridor gratings.	Do.
137	Dec. 7	Edward Kelley	Squares Nos. 379, 380, 381, and 382, &c.	Remove the filth from old brick sewer, lay a pipe sewer, house and other connections, filling the old sewer with fresh earth, building manholes, and other work necessary for the complete abatement of the nuisance of this sewer.	Do. 3, 113 72
139	Dec. 7	George White, Robert White, and Charles White.	New work-house.....	Construct and place in position iron bunks.	Do.
141	Jan. 8	William and Robert Ballantyne.	Stationery and school-books.	Furnish and deliver for 6 months ending June 30, 1879.	Do.
142	Jan. 10	Gustav and James Lansburg.	Dry goods, clothing, and notions.	do .....	Do.
143	Jan. 10	Henry W. Hall.	Groceries and provisions	do .....	Do.
144	Jan. 11	J. L. Savage.	Hardware	do .....	Do.
145	Jan. 13	Frank P. May and Philip May.	do .....	do .....	Do.
146	Jan. 13	Junius Schenck, agent Eurcka	Saddlery (hose) .....	do .....	Do.
147	Jan. 14	Hose Company.	Boots and shoes .....	do .....	Do.
148	Jan. 14	James W. Selby	Northern market .....	Repair roof .....	Do.
149	Jan. 14	J. T. Walker	Blank forms and printing.	Furnish and deliver for six months ending June 30, 1879.	Do.
150	Jan. 14	William Gibson, John Gibson, & George Gibson.	Construction material (brick, hand-made).	do .....	Do.
151	Jan. 14	Marcellus Cole & James F. McElfresh.	Lamp-posts and castings	do .....	Do.
152	Jan. 15	Charles A. Schneider, John A. Schneider, and Chas. F. Schneider.	Construction material (curb, &c.).	do .....	Do.
153	Jan. 15	Samuel Emery	Hardware .....	do .....	Do.
154	Jan. 15	Thos. Somerville.	Street-lamps .....	do .....	Do.
155	Jan. 17	Walter D. Wyvill	Hardware .....	do .....	Do.
156	Jan. 17	John McClelland.	Construction material (lime and cement).	do .....	Do.
	Jan. 17	H. W. Blunt	do .....	do .....	Do.

TABLE A.—Sewer and miscellaneous work from July 1, 1878, to June 30, 1879—Continued.

No. of contract.	Date.	Name of contractor.	Locality.			Description of work.	Cost to June 30, 1879.	Remarks.
			Street.	From—	To—			
157	1879. Jan. 17	Charles F. Peck, pres't Washington Brick Manu- facturing Com- pany.	Brick			Furnish and deliver for six months ending June 30, 1879.		Complete.
158	Jan. 17	Richard Rodwell and George L. Benner.	Construction material (trap-frames).			do		Do.
159	Jan. 23	Conrad Becker	Saddlery			do		Do.
160	Jan. 17	Isidore Benawan- ger.	Construction material (cutb).			do		Do.
161	Jan. 17	J. G. Naylor	Georgetown market- house.			Construct an addition to		Do.
162	Jan. 21	Solomon Graves, president Potomac Terra Cotta Company.	Construction material (sewer-pipe).			Furnish and deliver for six months ending June 30, 1879.		Do.
163	Jan. 29	H. Clay Jones.	Forage			do		Do.
164	Jan. 24	Thomas K. Schil- ler and Edward Stevens.	Drugs, chemicals, and paints.			do		Do.
165	Jan. 27	Andrew Kramer	Meats			do		Do.
166	Feb. 6	H. I. Gregory	Stoves, &c			Alter and reconstruct truck- house on Massachusetts ave- nue for an engine-house.		Do.
167	Feb. 1	J. G. Naylor	Massachusetts avenue	Fourth street, n. w.	Fifth street, n. w.	Furnish and deliver for six months ending June 30, 1879.		Do.
168	Feb. 11	George A. Sweeney	Lumber and building material.			do		Do.
169	Feb. 13	John W. McKnight	Furniture			Cleanse and iron, weekly, the sheets, pillow-cases, towels, and bed-spreads, of the metro- politan police department.		Do.
170	Jan. 7	A. W. Roome				Furnish and deliver for six months ending June 30, 1879.		Do.
173	Mar. 6	Francis F. Barker, Kennebec Ice Company.	Ice			do		Do.
174	Apr. 14	Thomas Norfleet and Cyrus Maz.	Saddlery			do		Do.



176	Apr. 8	E. D. Smith and H. L. Cranford.	Tiber sewer .....	.....	Repair Tiber sewer and con- struct overflow in the Botani- cal Gardens, District of Colum- bia.	9,629 30	Incomplete.
177	Apr. 7	B. J. Coyte, W. J. Whithorne, & D. B. Cooper.	.....	.....	Construct an outlet at or near 17th and B streets, n. w., con- sisting of an arch of 24 feet span, supported by side walls upon pile foundations. Construct through the White Lot from B street to 15th and E streets n. w., a 3-ring brick sewer, 8 feet internal diameter, upon an hydraulic cement con- crete foundation, with five manholes complete. Construct on 15th street, from E street to New York avenue, and on New York avenue, from 15th to 13th streets, a 2-ring brick sewer, 6½ feet internal di- ameter, upon an hydraulic-cem- ent concrete foundation, with eleven manholes complete. Construct on New York avenue, from 13th to 11th streets, n. w., a 2-ring brick sewer, 5 feet in- ternal diameter, with four man- holes complete. Construct on New York avenue, from 11th to 9th streets, n. w., a 2-ring brick sewer, 4½ feet in- ternal diameter, with five man- holes complete. Construct on the south side of Mount Vernon place, from 9th to 7th streets, n. w., a 2-ring brick sewer, 3½ feet internal di- ameter, with three manholes complete. Repair engine-house on ..... Construct a 2-ring brick barrel- sewer, 2 feet inside diameter, with necessary manholes. Sweeping and cleaning from April 15, 1879 to June 30, 1880. Rock excavation .....	27,488 00	Do.
178	Apr. 23	J. H. Howlett .....	D street, northwest .....	Thirteenth street .....	.....	358 78	Complete.
179	Apr. 30	W. H. Mohler .....	Sixteenth street, north- west .....	Twelfth street .....	Caroline street .....	.....	Do.
180	Apr. 22	F. M. Draney .....	Alleys .....	.....	.....	924 44	Incomplete.
		J. S. Hopkins .....	O street, northwest, Twenty-first street, northwest, and alley, square 96.	.....	.....	175 00	Authorized by Commis- sioners District of Co- lumbia, August 27, 1878.

TABLE A.—*Sewer and miscellaneous work from July 1, 1878, to June 30, 1879—Continued.*

No of con- tract.	Date.	Name of contract- or.	Locality.		Description of work.	Cost to June 30, 1879.	Remarks.
			Street.	From— To—			
.....	1879. .....	James Gannon....	Alley, square 100.....	.....	Filling.....	\$97 16 115,473 72	Authorized by Commis- sioners District of Co- lumbia, January 14, 1879.

## APPENDIX P 9

TABLE B.—*Sewer and miscellaneous work from July 1 to September 30, 1879.*

No. of con- tract.	Date.	Name of contractor.	Locality.		Description of work.	Cost to Oc- tober 1, 1879.	Remarks.
			Street.	From— To—			
52 and ex- 176	1877. May 10 1879. Apr. 8	L. P. Wright..... E. D. Smith and H. L. Cranford.			Sweeping and cleaning streets in Washington and Georgetown. Repair Tiber sewer and construct over- flow in the Botanical Gardens, Dis- trict of Columbia. Construct an outlet at or near Seven- teenth and B streets northwest, con- sisting of an arch of 24 feet span, supported by side walls upon pile foundations. Construct through the White Lot, from B street to Fifteenth and E streets, northwest, a 3-ring brick sewer, 8 feet internal diameter, upon a hy- draulic-cement concrete foundation, with 5 manholes, complete. Construct on Fifteenth street from E street to New York avenue and on New York avenue from Fifteenth to Thirteenth streets, a 2-ring brick sewer, 6½ feet internal diameter, upon a hydraulic-cement concrete foundation, with 11 manholes, com- plete. Construct on New York avenue, from Thirteenth to Eleventh streets north- west, a 2-ring brick sewer, 5 feet in- ternal diameter, with 4 manholes, complete. Construct on New York avenue, from Eleventh to Ninth streets northwest, a 2-ring brick sewer, 4½ feet internal diameter, with 5 manholes, complete. Construct on the south side of Mount Vernon Place, from Ninth to Seventh streets northwest, a 2-ring brick sewer, 3½ feet internal diameter, with 3 manholes, complete.	\$8,775 00 2,903 73 19,866 60	Incomplete. Do. Do.

TABLE B.—*Sewer and miscellaneous work from July 1 to September 30, 1879—Continued.*

No. of contract.	Date.	Name of contractor.	Street.	Locality.	To—	Description of work.	Cost to October 1, 1879.	Remarks.
	1879.							
180	Apr. 22	F. M. Draney	Alley			Sweeping and cleaning from April 15, 1879, to June 30, 1880.	\$1,455.43	Incomplete.
184	May 19	H. I. Gregory	Street designations			Furnish street designations, with cast-iron frames, for four glass sand-blast signs, to be securely attached to the outside of street lamps in the cities of Washington and Georgetown, D. C., wherever directed by the Engineer Commissioner, District of Columbia.	1,575.00	Do.
188	June 10	J. G. Loane	Boundary street	Fourteenth street east.	Eastern Branch	Construct the outlet section of Boundary street (intercepting) auxiliary sewer, and so much of the 20-foot sewer as may be required to connect a steam-pump for emptying sewers.	2,226.50	Do.
190	June 30	L. R. Keizer	Stoves, &c			Furnish and deliver for year ending June 30, 1880.		Do.
192	July 1	H. I. Gregory				do		Do.
194	July 7	W. H. Donipsey	Stationery			do		Do.
195	July 8	H. W. Blund	Hydraulic cement			do		Do.
197	July 10	Walter D. Weyill	Stones			do		Do.
198	July 11	Franklin Rives	Blank forms and printing			do		Do.
199	July 14	W. J. and F. J. Acker	Stone			do		Do.
200	July 14	H. W. Hall	Groceries			do		Do.
201	July 14	Emma H. Gilman	Drugs, &c			do		Do.
202	July 15	Robert Cohen	Boots and shoes			do		Do.
203	July 15	George H. Shreehan	Lumber			do		Do.
204	July 15	George H. Shreehan	Forage			do		Do.
205	July 15	E. K. Johnson and A. L. Johnson	Fuel			Furnish and deliver for year ending June 30, 1880.		Do.
206	July 15	J. L. Savage	Hardware			do		Do.
207	July 15	Great Falls Ice Company	Ice			do		Do.
208	July 15	Conrad Becker	Saddlery			Furnish and deliver for year ending June 30, 1880.		Do.
210	July 16	Gustav Lansburg and James Lansburg	Dry goods, clothing, and notions.			do		Do.
211	July 10	William Ballantyne and R. C. Ballantyne	School-books			do		Do.
212	July 14	Eureka Fire Hose Company	Fire department fabric			do		Do.
213	July 14	Wm. J. Samserville	House, plumbing, and meat supplies			do		Do.
215	July 21	M. H. Houtler	Meats			do		Do.

216	July 21	Thomas Norfleet and Cyres Mantz	Treestrops	do	Do.
217	July 25	Isaac P. Childs and Jacob Childs	Brick	do	Do.
218	July 25	John McClelland	Iron pipe and castings	do	Do.
219	July 26	Charles A. Schneider John A. Schneider and Charles F. Schneider	Lamp-posts and miscel- laneous castings.	do	Do.
220	July 18	John T. Varnell	Meats	do	Do.
224	Aug. 5	Thomas Somerville	Sewer pipe and fittings	do	Do.
225	Aug. 8	Franklin B. Colton	Tiber sewer	Dredge the outlets of Tiber sewer or so much thereof as may be deemed advantageous to the District.	Do.
226	Aug. 11	W. B. Moses	Furniture	Furnish and deliver for year ending June 30, 1880.	Do.
227	Aug. 21	Lewis Morris	Corner Fourth and L streets.	Repair and alter the school-house located corner Fourth and L streets, north- west.	Complete.
230	Aug. 29	John H. Howlett	Industrial Home School	Construct a workshop and laundry, and repair the Industrial Home School building, in Georgetown, D. C.	Do.
234	Sept. 27	John C. Callahan and Isaac Levy	Painting lamps, &c	Paint the public lamps and lamp-posts with one coat of Imperial green paint, mixed with boiled oil, for the period of time from this date to June 30, 1880.	Incomplete.
					37,789 30

TABLE C.—Schedule of contracts for pavements and repairs of

No. of contract.	Date.	Name of contractor.	Locality.		
			Street.	From—	To—
104	Aug. 13, 1878	A. Gleason and Edward Kelley.	7th street west	D street north	Q street north
114	Sept. 13, 1878	W. C. Murdock	14th street west	H street north	Boundary
			East Capitol street	First street east	2d street east
				2d street east	9th street east
113	Sept. 27, 1878	J. J. Shipman	New-cut road		
114	Oct. 14, 1878	James O'Day	18th street west	Q street north	R street north
116	Oct. 15, 1878	Cranford, Hoffman & Filbert.	Various streets		
117	Oct. 22, 1878	J. Desmond and W. H. Adams.	Sheridan road at Stickfoot Bench.		
121	Oct. 24, 1878	John E. Zug	Washington street	West street	Stoddard st. G. N.
122	Oct. 28, 1878	John S. Baldwin	F street north	5th street west	7th street west
			3d street west	L street north	New York ave.
			11th street west	E street north	F street north
			12th street west	D street north	E street north
			13th street west	Pennsylvania ave.	do
			13th street west	B street north	C street north
			14th street west	Intersection of	N street north
			Penna. ave. south	H street north	M street north
			do	1st street east	2d street east
			Vermont avenue	Intersec'n 2d st. e.	do
			M street north	Intersec'n N st. n	14th street west
				6th street west	
124	Oct. 29, 1879	Cranford, Hoffman & Filbert.	13th street west	Pennsylvania ave.	E street north
125	Oct. 30, 1878	Jonathan Taylor	E street north	11th street west	14th street west
			do	11th street west	do
			10th street west	E street north	F street north
			11th street west	do	do
			12th street west	do	do
			13th street west	do	do
126	Oct. 30, 1879	do	D street west	6th street west	10 street west

# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 437

DIX P 9.

streets and roads during the fiscal year July 1, 1878, to June 30, 1879.

Description and character of work.	Number of square yards.	Cost per square yard.	Extra work.	Cost of material.	Total cost.	Remarks.
Lay stone block pavement, hydraulic-cement concrete base, with filling of heated gravel and paving cement in the joints.	18,464.73	\$2 61	\$86 19	.....	\$48,279 13	Complete.
Lay asphaltum pavement on east side of Washington and Georgetown Railroad tracks, and around the Circle at intersection of M street and Massachusetts avenue.	29,085.	1 97½	2,663 03	\$33 07	60,211 69	Do.
Lay asphaltum pavement both sides of Metropolitan Railroad tracks.	10,511.21	2 04½	.....	.....	21,521 70	Do.
Lay asphaltum pavement on south side.	.....	.....	.....	.....	1,280 09	Do.
Construct a stone apron on south side new culvert, over Foundry Branch.	.....	.....	.....	.....	178 75	Do.
Deposit earth .....	.....	.....	.....	.....	18,618 22	Do.
Repairs to concrete pavements.	.....	.....	.....	.....	430 67	.....
Construct a culvert .....	.....	.....	.....	.....	904 20	Do.
Lay macadam pavement ..	1,310.44	69	.....	.....	4,198 84	Do.
	2,358.90	1 78	.....	.....	4,779 46	Do.
	2,685.09	1 78	.....	.....	2,337 46	Do.
	1,313.18	1 78	.....	.....	4,458 98	Do.
Lay asphaltum pavement 2½ inches in thickness upon an hydraulic base 6 inches in depth.	2,500.00	1 78	1 50	7 48	2,323 28	Do.
	1,291.77	1 78	16 45	7 48	3,132 02	Do.
	1,759.56	1 78	.....	.....	1,120 02	Do.
	613.90	1 80	15 00	.....	10,400 18	Do.
	5,681.71	1 75	343 86	113 33	7,226 31	Do.
	4,064.80	1 75	112 91	.....	2,028 00	Do.
	1,138.06	1 78	2 25	.....	1,094 26	Do.
	602.37	1 80	10 00	.....	32,199 07	Of which \$3,376.47 is for extra grading, setting curb gutters, brick pavements, rebuilding traps &c. Complete.
Lay asphaltum pavement 2½ inches in thickness upon an hydraulic base 6 inches in depth, and grade, set curb, relay footwalks, and move out sewer-traps to new curb-line.	13,146.06	1 75	359 78	5,456 27	.....	.....
Lay asphaltum pavement.	684.72	1 79	.....	.....	1,225 65	Complete.
Lay compressed asphalt blocks.	1,093.35	2 37½	64 91	.....	2,661 61	Do.
	2,486.67	2 09	228 44	.....	5,385 74	Complete; \$39.84 deducted for deficiency in paving cement.
	1,372.29	2 11	21 00	.....	2,916 53	Complete.
	1,734.27	2 11	.....	.....	3,609 68	Complete; \$49.63 deducted for deficiency in paving cement.
Lay stone-block pavements, gravel and sand foundation, filling of heated gravel and paving cement in the joints.	1,627.27	2 11	.....	.....	3,432 41	Complete; \$1.13 deducted for deficiency in paving cement.
	1,741.33	2 11	41 14	.....	3,708 21	Complete; \$7.14 deducted for deficiency in paving cement.
.....do .....	6,277.96	2 15	171 50	.....	13,628 19	Complete; \$40.92 deducted for deficiency in paving cement.

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TABLE C.—Schedule of contracts for pavements and repairs of streets

No. of contract.	Date.	Name of contractor.	Locality.		
			Street.	From	To—
127	Nov. 1, 1878	W. R. Davies .....	E street north ....	5th street west ....	11th street west ...
129	Nov. 1, 1878	Ross & Murdock ....	Wash. st., G'n ....	Bridge street.....	Gay street .....
			High street, G'n .....	do .....	West street .....
			West street, G'n ...	Washington street.	Rock Creek .....
			P street, G'n .....	20th street .....	do .....
			B street southeast	Intersection of N. J. ave.	.....
136	Dec. 3, 1878	F. M. Draney .....	Kirby street .....	N street north ....	New York avenue.
138	Dec. 3, 1878	do .....	Reservation .....	Del. ave., 1st st. and F st. n. e.	.....
171	Dec. 17, 1878	do .....	Piney branch at 14th street road.	.....	.....
172	Apr. 4, 1879	Jonn Miller and Geo. Stafford.	F street north ....	2d street east .....	7th street east ....
175	Apr. 8, 1879	Johanna McNamara and P. Maloney.	Improve south ap- proach to Ana- costia Bridge.	.....	.....
181	May 14, 1879	William Buckley ....	West street, G'n ..	Washington street.	High street, G'n ..
182	May 16, 1879	J. S. Baldwin .....	Penn. ave. south ...	2d street east .....	4th street east ...
			B street south .....	6th street west ....	14th street west
163	May 19, 1879	W. R. Davies .....	West street, G'n ...	Washington street.	High street .....
185	May 31, 1879	J. G. Stafford .....	Back street, G'n ..	Hamiller's lane ...	Boundary line ...
			Turnlaw road .....	Bridge line .....	Loughboro Lane
186*	June 9, 1879	W. E. Vermillion and John Cudmore.	7th street road ....	Boundary street...	District line .....
187	June 9, 1879	Burkhart & Gleason..	Bladensburg road near Clark Mills's.	.....	.....

\* And extension.



# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 439

and roads during the fiscal year July 1, 1878, to June 30, 1879—Continued.

Description and character of work.	Number of square yards.	Cost per square yard.	Extra work.	Cost of material.	Total cost.	Remarks.
Lay asphalt pavement 2½ inches in thickness when compressed, with an hydraulic-cement concrete base 6 inches in depth.	9,323.27	\$1 75	\$19 68	.....	\$16,335 40	Complete.
	2,121.12	2 15	.....	.....	4,425 50	Complete. \$134.91 deducted for deficiency in paving cement.
	6,202.08	2 15	155 32	.....	13,095 41	Complete. \$394.38 deducted for deficiency in paving cement.
Lay stone-block pavement, gravel and sand foundation, filling of heated gravel and paving cement in the joints.	6,869.17	2 15	166 34	.....	14,498 19	Complete. \$436.86 deducted for deficiency in paving cement.
	3,481.15	2 15	67 99	\$34 15	7,365 21	Complete. \$221.40 deducted for deficiency in paving cement.
	604.64	2 15	.....	.....	1,261 50	Complete. \$38.47 deducted for deficiency in paving cement.
Grade, set curb, lay brick footwalks, cobble-stone gutters and cross-flag.	.....	.....	18 08	21 18	1,597 33	Complete.
Grade, set curb, lay brick footwalks.	.....	.....	328 40	.....	902 40	Do.
Construct a bridge over.....	.....	.....	.....	.....	356 20	Do.
Grade, set curb, corners, lay cobble-stone gutters and cross-flag, brick pavement, and gravel carriage-way.	.....	.....	302 96	3,931 95	6,932 93	Do.
Construct 33 and 36 inch brick sewer, lay 18-inch pipe-sewer, construct sewer-drops, set curb, brick sidewalks, cobble-stone gutters and gravel carriage-way.	.....	.....	26 28	102 00	1,007 09	Do.
Lay granite-block pavement, gravel and sand foundation, filling of heated gravel and paving cement, on the north side of railroad track.	2,042.05	1 95	11 75	.....	3,902 53	Complete. \$91.22 deducted for deficiency in paving cement.
Lay asphaltum pavement 2½ inches when compressed, hydraulic-cement concrete base, 6 inches in depth.	4,458.37	1 47	.....	.....	6,553 80	Complete.
	12,840	1 47	795 29	212 76	19,882 85	Do.
Lay granite-block pavement, gravel and sand foundation, filling of heated gravel and paving cement, on south side of railroad track.	1,968.57	1 95	295 28	.....	4,066 95	Complete. \$67.04 deducted for deficiency in paving cement.
Excavate earth and rock embankment, construct culverts and gravel roadway.	.....	.....	105 30	114 60	4,845 73	Incomplete. Cost of completion, \$1,743.97.
Grading and repairing the gravel portion of the road, taking up and relaying gutters.	.....	.....	600 95	129 25	1,455 12	Incomplete. Requires for completion, \$3,666.48.
Rebuild end walls and repair broken portion of the arch of the culvert.	.....	.....	.....	42 90	1,231 90	Complete.

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TABLE C.—Schedule of contracts for pavements and repairs of

No. of contract.	Date.	Name of contractor.	Locality.		
			Street.	From—	To—
189	June 20, 1879	John S. Baldwin.....	M street north ....	N. Hampshire ave.	18th street west.
			N. Hampshire ave.	M street north ....	Pennsylvania ave
			N street north ....	9th street west ....	14th street west.
			Massachusetts ave.	13th street west ...	9th street north.
			10th street west ...	K street north ....	M street west ...
			E street north.....	1st street west ....	4th street west ..
			F street north.....	...do .....	...do .....
			Penn. ave. s. side ..	4th street east.....	7th street east ..
			I street north .....	9th street west ....	10th street west...
		Total .....	.....	.....	.....

# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 441

streets and roads during the fiscal year July 1, 1878, to June 30, 1879.

Description and character of work.	Number of square yards.	Cost per square yard.	Extra work.	Cost of material.	Total cost.	Remarks.
Lay asphalt pavement 2½ inches in thickness, hydraulic-cement concrete base, 6 inches in thickness.	6,247	\$1 47	.....	.....	\$3,255 76	Incomplete. Requires for completion, \$5,927.39.
	6,844	1 47	.....	.....	10,000 68	Complete.
	6,900	1 47	.....	.....	.....	Incomplete. Requires for completion, \$10,143.
	9,830	1 47	.....	.....	4,840 32	Incomplete. Requires for completion, \$9,610.08.
	3,364	1 47	.....	.....	.....	Incomplete. Requires for completion, \$4,945.08.
	4,932.02	1 47	\$116 76	.....	7,566 83	Complete.
	4,382.01	1 47	11 94	.....	6,453 63	Do.
	6,126.04	1 47	82 66	\$3 80	9,115 48	Do.
Including extra grading, relaying footwalks, resetting curbs, &c.	1,832	1 47	.....	.....	.....	Incomplete. Requires for completion, \$3,148.80.
.....	213,913.12	.....	7,242 94	10,210 22	414,099 09	

TABLE D.—Schedule of contracts for pavements and repairs

No. of contract.	Date.	Name of contractor.	Locality.		
			Street.	From—	To—
182	May 16, 1879	John S. Baldwin .....	Pa. avenue north ..	15½ street west ...	18th street west ...
			17th street west ...	F street north ...	Pennsylvania avenue.
191	July 1, 1879	McKnight & Burns..	C street north ....	7th street west ...	8th street west..
			Intersection 7th street west.	.....	Louisiana ave. nue north.
			9th street west....	P street north ...	U street north ..
			1st street west....	Pennsylvania ave.	F street north ..
			H street north ....	North Capitol st ..	4th street west..
193	July 3, 1879	Jonathan Taylor ....	F street south ....	4½ street west ....	7th street west ..
			1st street east ....	A street north ....	B street north ..
196	July 10, 1879	Crawford, Hoffman & Filbert.	16½ street west....	H street north ....	Pa. avenue north
			15½ street west....	do .....	do .....
			15th street west....	K street north ....	N. Y. ave. north ..
			Vermont avenue....	H street north ....	I street north ...
209	July 16, 1879	B. Reardon.....	Virginia avenue ..	3d street east ....	4th street east....
214	July 23, 1879	McKnight & Burns..	New Jersey ave. s	B street south ....	E street south....
221	July 28, 1879	H. L. Crawford.....	Various streets .....	.....	.....
222	July 30, 1879	Bailey French Pav- ing Company (D. W. Bailey, agent).	G street north ....	5th street west ...	7th street west..
			13th street west...	F street north ....	N street north ..
			18th street west...	K street north ....	Pa. avenue .....
			H street north ....	18th street west..	22d street west..
			do .....	7th street west ...	10th street west.
			20th street west...	New Hampshire avenue.	M street north ..
			Mt. Vernon square	7th street west....	9th street west..
			Pa. avenue east ...	6th street east ....	8th street east...
			B street north ....	Delaware avenue ..	1st street east...
223	Aug. 4, 1879	Thomas Joyce .....	South Capitol st..	B street south .....	N street south ....
228	Aug. 25, 1879	F. M. Draney .....	M street north....	New York avenue.	1st street east ...
			N. Hampshire ave.	Q street north ....	T street north...
			Dunbarton street (Georgetown).	Congress street ...	Washington st..

# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 443

P 9.

of streets and roads from July 1, 1879, to October 10, 1879.

Description and character of work.	Number of square yards.	Cost per square yard.	Extra work.	Cost of material.	Total cost.	Remarks.
Lay asphaltum pavement, 2½ inches thick, with base of hydraulic cement; concrete 6 inches in thickness.	15,330	\$1 47	\$418 52		\$10,631 12	Estimated completion, \$11,903.98.
	2,215	1 47				Estimated completion, \$3,256.05.
Lay granite-block pavement, with gravel and sand foundations, and filling of heated gravel and asphaltic paving cement in the joints.	1,100	1 87				Incomplete; requires for completion \$2,507.
	2,890	1 87				Incomplete; requires for completion \$5,404.20.
	5,892	1 87				Revoked Sept., 1879.
	9,105	1 87				Incomplete; requires for completion \$17,026.35.
	8,120	1 87				Incomplete; requires for completion \$15,180.40.
Resurface the concrete pavement with asphalt wearing surface 2½ inches in thickness when compressed.	4,300	98½				Incomplete.
	2,342.65	93½	177 71		2,368 08	Complete.
Resurface the concrete pavement with asphalt wearing surface 2½ inches in thickness when compressed.	2,196.34	92½	144 90		2,176 51	Do.
	1,996.74	92½	122 80		1,869 78	Do.
	6,563.07	92½	654 60	\$31 50	6,756 94	Do.
	4,156.54	92½	528 62	509 61	4,882 84	Do.
Furnishing all necessary material (except curb, gutter-flag, cross-flag and brick), set curb, lay gutter-flag, lay and relay brick footwalks, cobble-stone gutters, grade and gravel the carriage-way.			6 50	420 00	1,047 01	Do.
Lay stone-block pavement with gravel and sand foundation, and filling of heated gravel and asphaltic paving cement in the joints.	9,000	1 87				Incomplete; requires for completion \$16,830.
Minor repairs to bituminous pavements.					2,780 70	Incomplete; requires for completion \$2,500.
	3,700	85				Incomplete; requires for completion \$3,145.
	13,686	87				Incomplete; requires for completion \$11,906.82.
	1,850	1 00				Incomplete; requires for completion \$1,850.
	6,519	1 05				Incomplete; requires for completion \$6,844.95.
Resurface concrete pavement with asphalt wearing surface 2½ inches in thickness when compressed.	4,740	85				Incomplete; requires for completion \$4,029.
	2,995	1 00				Incomplete; requires for completion \$2,995.
	7,183	82				Incomplete; requires for completion \$5,890.06.
	2,919	87				Incomplete; requires for completion \$2,539.53.
	1,945	90				Incomplete; requires for completion \$1,750.50.
Grade, set curbs, corners; lay 12-inch gutter-flag, 16-inch cross-flag; furnish and lay cobble-stone gutters and crossings; lay brick pavements, build sewer-traps, lay 12-inch sewer-pipe connections.				10,000 00	5,331 08	Incomplete; requires for completion \$11,957.11.
.....do				4,120 74		Incomplete; requires for completion \$6,663.70.
				3,470 33		Incomplete; requires for completion \$8,064.26.
				965 41		Incomplete; requires for completion \$2,002.48.

## 444 REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA.

TABLE D.—Schedule of contracts for pavements and repairs of streets

No. of contract.	Date.	Name of contractor.	Locality.		
			Street.	From—	To—
232	Sept. 16, 1879	William Buckley ....	2d st. (Georgetown). F street north ...	Fayette street .... 7th street west ....	High street..... 9th street west ..
231	Sept. 18, 1879	W. C. Murdock .....	5th street west ... 20th street west ..	L street north .... Pennsylvania ave ..	P street north ... I street north ...
229	Aug. 29, 1879	Thomas Kirby .....	North Capitol st ..	K street north ....	Boundary street...
233	Sept. 25, 1879	Carmody & Hines....	C street south ...	9th street west ....	13½ street west ....
235	Sept. 27, 1879	Thomas Joyce .....	Delaware avenue C street north ... Market Space..... 20th street west... 21st street west... 9th street west....	B street north .... Delaware avenue 8th street west.... I street north ..... .....do .....	C street north ... 1st street west .. 9th street west .. K street north ... .....do .....
236	Sept. 25, 1879	William Buckley ....	10th street west...	B street south ....	Maryland avenue ..
Total .....					

# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 445

and roads from July 1, 1879, to October 10, 1879—Continued.

Description and character of work.	Number of square yards.	Cost per square yard.	Extra work.	Cost of material.	Total cost.	Remarks.
Lay granite-block pavement, with gravel and sand foundation, and filling of heated gravel and asphalt paving cement in joints.	4,310	1 93	.....	.....	.....	Incomplete; requires for completion \$8,313.30.
	650	1 93	.....	.....	.....	Incomplete; requires for completion \$1,254.50.
Lay asphalt pavement, 2½ inches in thickness when compressed, with base of hydraulic cement concrete 6 inches deep.	5,000.90	1 46	.....	.....	.....	Incomplete; requires for completion \$7,431.40.
	490	1 46	.....	.....	.....	Incomplete; requires for completion \$715.40.
Grade, set curbs, reset curbs, lay and relay 12-inch gutter-flag, lay 16-inch cross-flag, relay cobble-stone gutters, lay and relay brick sidewalks and gravel the carriage-way.	.....	.....	.....	3,640 14	.....	Incomplete; requires for completion \$7,577.71.
.....do.....	.....	.....	.....	1,016 50	.....	Incomplete; requires for completion \$2,336.78.
	3,330	1 92	.....	.....	.....	Incomplete; requires for completion \$6,393.60.
Lay granite-block pavement, with gravel and sand foundation, and filling of heated gravel and asphalt paving cement in the joints.	4,670	1 92	.....	.....	.....	Incomplete; requires for completion \$8,966.40.
	1,000	1 91	.....	.....	.....	Incomplete; requires for completion \$1,910.
	1,820	1 92	.....	.....	.....	Incomplete; requires for completion \$3,494.40.
	1,500	1 92	.....	.....	.....	Incomplete; requires for completion \$2,880.
	2,165	1 91	.....	.....	.....	Incomplete; requires for completion \$4,135.15.
Grade, set curbs, reset curbs, lay and relay 12-inch gutter-flag, lay 16-inch cross-flag, relay cobble-stone gutters, lay and relay brick sidewalks and gravel the carriage-way.	.....	.....	.....	501 60	.....	Incomplete; requires for completion \$1,442.90.
.....	145,680.24	.....	1,625 13	24,676 31	32,937 62	

## 444 REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA.

TABLE D.—Schedule of contracts for pavements and repairs of streets

No. of contract.	Date.	Name of contractor.	Locality.		
			Street.	From—	To—
232	Sept. 16, 1879	William Buckley ....	2d st. (Georgetown).	Fayette street ....	High street.....
			F street north ...	7th street west....	9th street west ..
231	Sept. 18, 1879	W. C. Murdock .....	5th street west....	L street north ....	P street north...
			20th street west...	Pennsylvania ave	I street north ...
229	Aug. 29, 1879	Thomas Kirby .....	North Capitol st ..	K street north ....	Boundary street...
233	Sept. 25, 1879	Carmody & Hines....	C street south ...	9th street west....	13½ street west ....
235	Sept. 27, 1879	Thomas Joyce .....	Delaware avenue	B street north ....	C street north...
			C street north ...	Delaware avenue	1st street west ..
			Market Space.....	8th street west....	9th street west ..
			20th street west...	I street north .....	K street north ..
			21st street west...	Pennsylvania ave.	....do .....
			9th street west....	....do .....	B street north...
236	Sept. 25, 1879	William Buckley ....	10th street west...	B street south ....	Maryland avenue ..
Total .....					



# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 445

and roads from July 1, 1879, to October 10, 1879—Continued.

Description and character of work.	Number of square yards.	Cost per square yard.	Extra work.	Cost of material.	Total cost.	Remarks.
Lay granite-block pavement, with gravel and sand foundation, and filling of heated gravel and asphalt paving cement in joints.	4,310	1 93	.....	.....	.....	Incomplete; requires for completion \$8,313.30.
	650	1 93	.....	.....	.....	Incomplete; requires for completion \$1,254.50.
Lay asphalt pavement, 2½ inches in thickness when compressed, with base of hydraulic cement concrete 6 inches deep.	5,000.90	1 46	.....	.....	.....	Incomplete; requires for completion \$7,431.40.
	490	1 46	.....	.....	.....	Incomplete; requires for completion \$715.40.
Grade, set curbs, reset curbs, lay and relay 12-inch gutter-flag, lay 16-inch cross-flag, relay cobble-stone gutters, lay and relay brick sidewalks and gravel the carriage-way.	.....	.....	.....	3,640 14	.....	Incomplete; requires for completion \$7,577.71.
do	.....	.....	.....	1,016 50	.....	Incomplete; requires for completion \$2,336.78.
	3,330	1 92	.....	.....	.....	Incomplete; requires for completion \$6,393.60.
	4,670	1 92	.....	.....	.....	Incomplete; requires for completion \$8,966.40.
Lay granite-block pavement, with gravel and sand foundation, and filling of heated gravel and asphaltic paving cement in the joints.	1,000	1 91	.....	.....	.....	Incomplete; requires for completion \$1,910.
	1,820	1 92	.....	.....	.....	Incomplete; requires for completion \$3,494.40.
	1,500	1 92	.....	.....	.....	Incomplete; requires for completion \$2,880.
	2,165	1 91	.....	.....	.....	Incomplete; requires for completion \$4,135.15.
Grade, set curbs, reset curbs, lay and relay 12-inch gutter-flag, lay 16-inch cross-flag, relay cobble-stone gutters, lay and relay brick sidewalks and gravel the carriage-way.	.....	.....	.....	501 60	.....	Incomplete; requires for completion \$1,442.90.
.....	145,680.24	.....	1,625 13	24,676 31	32,937 62	

## APPENDIX P 10.—Schedule of streets paved with wood and requiring new pavements.

Street.	From—	To—	Carriage-way.	
			Width.	Square yards.
First street east	B street north	C street north	Feet.	
Do	B street south	C street south	35	2,100
First street west	Pennsylvania avenue	Indiana avenue	35	2,077
Do	Indiana avenue	F street north	56	4,666
Do	G street north	H street north	40	3,150
Do	Defrees street	I street north	32	1,493
Do	Pennsylvania avenue	Maryland avenue	32	487
Second street east	East Capitol street	do	53	2,500
Do	do	D street south	32	2,308
Second street west	Pennsylvania avenue	New Jersey avenue	35	7,025
Do	B street south	Maryland avenue	40	14,966
Third street east	East Capitol street	Pennsylvania avenue	32	1,100
Do	G street south	D street south	32	2,187
Third street west	Pennsylvania avenue	D street north	32	2,774
Do	do	B street south	32	4,267
Fourth street east	East Capitol street	C street south	40	5,467
Fifth street east	do	do	35	4,882
Fifth street west	New York avenue	O street north	40	5,284
Sixth street east	North Carolina avenue	Pennsylvania avenue	32	5,449
Sixth street west	F street north	G street north	35	1,127
Do	New York avenue	Boundary	32	965
Seventh street east	Pennsylvania avenue	D street south	35	16,721
Seventh street west (west side).	Market Space	D street north	32	890
Do	do	do	18	496
Eighth street east	D street south	Pennsylvania avenue	40	1,690
Do	K street south	M street south	35	3,178
Eighth street west	C street north	E street north	51	3,624
Do	G street north	Mount Vernon Place	30	3,910
Do	Mount Vernon Place	L street north	30	1,194
Do	N street north	R street north	30	5,670
Ninth street west	Pennsylvania avenue	B street north	51	2,146
Do	P street north	Boundary	50	9,922
Tenth street west	F street north	G street north	32	956
Do	M street north	R street north	32	8,067
Eleventh street west	K street north	O street north	35	3,892
Do	F street north	G street north	55	1,172
Twelfth street west	N street north	Rhode Island avenue	32	3,271
Fourteenth street west (west side).	Circle	Boundary	do	17,120
Fifteenth street west	Pennsylvania avenue	B street north	43	6,800
Do	K street north	Rhode Island avenue	32	6,380
Sixteenth street west	S street north	Boundary	32	4,445
Eighteenth street west	H street north	do	50	37,534
Do	New York avenue	Pennsylvania avenue	32	4,355
Nineteenth street west	K street north	L street north	32	1,498
Twentieth street west	Pennsylvania avenue	Circle	32	10,170
Twenty-first street west	do	K street north	32	2,304
Twenty-second street west	do	do	32	1,497
Do	K street north	M street north	32	2,977
Twenty-third street west	Pennsylvania avenue	do	32	2,622
East Capitol street	H street east	Eleventh street east	50	6,077
A street north	First street east	Second street east	35	3,186
A street south	do	Third street east	35	3,397
B street north	Pennsylvania avenue	Fifth street east	35	3,491
B street south	First street west	Third street west	35	3,365
C street north	do	Maryland avenue	35	4,900
C street south	Delaware avenue	Third street east	38	4,602
C street north	Fourth street east	Sixth street east	30	3,786
Do	Delaware avenue	New Jersey avenue	45	2,343
Do	New Jersey avenue	First street west	63	1,833
Do	Four-and-a-half street west	Second street west	30	3,420
Do	Fourteenth street west	Fifteenth street west	40	1,786
Twenty-sixth street west	K street north	Pennsylvania avenue	32	1,508
D street south	Second street east	Third street east	35	1,742
Do	Seventh street east	Eighth street east	30	825
D street north	Fourteenth street west	Fifteenth street west	40	1,944
E street north	do	do	40	1,963
F street north (north side)	Seventh street west	Ninth street west	do	466
F street north	Seventeenth street west	Eighteenth street west	do	2,524
H street north	North Capitol street	First street east	56	4,200
Do	do	First street west	50	3,225

## APPENDIX P 10.—Schedule of streets paved with wood, &amp;c.—Continued.

			Carriage-way.	
Street.	From—	To—	Width.	Square yards.
			Feet.	
H street north .....	First street west .....	Third street west .....	56	3,360
Do .....	Third street west .....	Fourth street west .....	37.5	1,150
I street north .....	Fifth street west .....	Eighth street west .....	32	4,133
K street north .....	Eighteenth street west .....	Pennsylvania avenue .....	50	12,050
L street north .....	Sixth street west .....	Eighth street west .....	32	2,538
Do .....	Twentieth street west .....	Pennsylvania avenue .....	32	6,997
M street north .....	New Jersey avenue .....	Sixth street west .....	56	8,014
Do .....	Fourteenth street circle .....	Sixteenth street west .....	40	4,570
Do .....	New Hampshire avenue .....	Twenty-sixth street west .....	40	8,711
N street north .....	New Jersey avenue .....	Ninth street west .....	32	7,688
Do .....	Fourteenth street west .....	Rhode Island avenue .....	32	3,800
O street north .....	Fifteenth street west .....	Sixteenth street west .....	32	1,513
Do .....	Sixteenth street west .....	Seventeenth street west .....	32	1,710
P street north .....	New Jersey avenue .....	Nineteenth street west circle .....	32	24,743
R street north .....	Ninth street west .....	Fourteenth street west .....	32	7,555
Pennsylvania avenue .....	Twenty-sixth street west .....	Twenty-third street west (south side).	33	5,658
Indiana avenue .....	Third street west .....	Sixth street west .....		13,521
Louisiana avenue .....	Sixth street west .....	Seventh street west .....		5,532
Do .....	Pennsylvania avenue .....	Ninth street west .....	50	1,125
Maryland avenue .....	First street west .....	Third street west .....	60	4,344
Missouri avenue .....	Third street west .....	Fourth-and-a-half street west .....	35	2,543
North Carolina avenue .....	Fourth street east .....	Sixth street east .....	40	1,655
South Carolina avenue .....	Seventh street east .....	Eighth street east .....	40	1,200
New Hampshire avenue .....	M street north .....	Q street north .....	50	10,283
Massachusetts avenue .....	Sixteenth street west .....	New Jersey avenue .....	50	13,535
Rhode Island avenue .....	Sixteenth street west .....	Fifth street west .....	50	25,775
New Jersey avenue .....	D street north .....	H street north .....	60	13,900
Do .....	H street north .....	O street north .....	50	20,500
Do .....	B street south .....	E street south .....	50	8,611
Delaware avenue .....	B street north .....	C street north .....	50	3,330
GEORGETOWNS.				529,502
Gay .....	Montgomery .....	High .....	30	5,523
First street .....	High .....	Fayette .....	30	5,584
Second street .....	do .....	do .....	30	4,305
Green .....	Bridge .....	West .....	30	4,950
Congress .....	do .....	do .....	30	4,914
Potomac .....	do .....	Second street .....	30	3,002
Market .....	First street .....	Third street .....	30	2,177
				30,455
				559,957

# 448 REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA.

## APPENDIX P 11.

*Schedule of proposed improvements for the completion of sundry avenues and streets in the cities of Washington and Georgetown, D. C.*

Street.	Limits.	Proposed improvement.	Estimated cost.
New York avenue.....	North Capitol to Boundary east.	Grade, set curb, gutters, and sidewalks, and gravel carriageway.	\$13,500 00
Delaware avenue north-east.	H to M.....	do	5,000 00
North Capitol.....	E to N.....	do	10,880 00
First northeast.....	K to New York avenue.....	do	7,000 00
Fifth northeast.....	K to Maryland avenue.....	do	2,700 00
A northeast.....	Third to Ninth.....	do	5,900 00
C northeast.....	Third to Fourth.....	do	130 00
D northeast.....	Second to Delaware avenue.....	do	2,870 00
G northeast.....	Fifth to North Capitol.....	do	3,500 00
Chicago northeast.....	First to Second.....	do	2,750 00
California northeast.....	do	do	2,560 00
Reservation northeast.....	G, H, and First.....	do	1,680 00
Virginia avenue southeast	Eleventh to South Capitol.....	do	22,110 00
North Carolina avenue southeast.	Sixth to Seventh.....	do	3,150 00
Third southeast.....	Virginia avenue to M.....	do	3,860 00
Seventh southeast.....	D to M.....	do	11,000 00
Eighth southeast.....	East Capitol to D.....	do	9,450 00
B southeast.....	Sixth to Eighth.....	do	4,100 00
C southeast.....	First to Second.....	do	2,420 00
E southeast.....	Sixth to Eighth.....	do	3,770 00
G southeast.....	Third to Eighth.....	do	9,210 00
I southeast.....	Second to Eighth.....	do	12,120 00
K southeast.....	Sixth to Seventh.....	do	1,790 00
M southeast.....	Fourth to Eleventh.....	do	13,180 00
Canal southwest.....	B to South Capitol.....	do	22,080 00
Eighth southwest.....	B to C.....	do	1,370 00
Ninth southwest.....	do	do	1,500 00
C southwest.....	Four-and-a-half to Sixth.....	do	2,530 00
New Jersey avenue north-west.	I to Boundary.....	do	12,000 00
Boundary northwest.....	Sixth to Delaware avenue.....	do	8,000 00
New Hampshire avenue northwest.	T to Boundary.....	do	7,620 00
Monroe northwest.....	Fifteenth to Seventeenth.....	do	2,000 00
First northwest.....	K to New York avenue.....	do	4,700 00
Twelfth northwest.....	R to T.....	do	3,700 00
Twenty-second northwest	M to Massachusetts avenue.....	do	9,000 00
F northwest.....	Twenty-second to Twenty-seventh.....	do	10,160 00
U northwest.....	Fourteenth to Sixteenth.....	do	4,330 00
T northwest.....	Ninth to Tenth.....	do	1,290 00
New Jersey avenue south-east.	I to M.....	Grade	8,200 00
Canal southeast.....	do	do	50,030 00
South Capitol southeast.....	N to S.....	do	6,000 00
One-half southeast.....	H to M.....	do	1,325 00
First southeast.....	I to M.....	do	2,900 00
Second southeast.....	E to I.....	do	2,290 00
Fifth southeast.....	C to M.....	do	2,080 00
Sixth southeast.....	K to M.....	do	2,530 00
C southeast.....	Sixth to Eighth.....	do	650 00
K southeast.....	South Capitol to Canal.....	do	4,250 00
L southeast.....	South Capitol to Eighth.....	do	4,180 00
Delaware avenue south-west.	B to Virginia avenue.....	do	9,000 00
C southwest.....	South Capitol to First.....	do	12,000 00
Eighteenth northwest.....	P to Boundary.....	do	4,500 00
X northwest.....	Twenty-second to Twenty-third.....	do	2,000 00
Pennsylvania avenue northwest.	First to Fifteenth.....	Relay sidewalks.....	15,000 00
H northwest.....	Vermont to Pennsylvania avenues.	Narrow carriageway and lay asphalt pavement.	18,000 00
I northwest.....	Seventeenth to Pennsylvania avenue.	do	15,000 00
E southwest.....	Four-and-a-half to Tenth.....	do	26,200 00
H southwest.....	First to Tenth.....	do	32,800 00
I northwest.....	Eighth to Ninth, and Tenth to Eleventh.....	do	4,250 00
Tenth northwest.....	D to E.....	do	3,890 00
Sixth southeast.....	Pennsylvania avenue to South Carolina avenue.	Lay asphalt pavement.....	7,000 00

# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 449

## APPENDIX P 11.—Schedule of proposed improvements, &c.—Continued.

Street.	Limits,	Proposed improvement.	Estimated cost.
I northwest .....	Second to Seventh.....	Narrow carriageway and lay stone block pavement.	\$16,375 00
Fourteenth northwest ...	Pennsylvania avenue to F.....	do .....	3,800 00
Virginia avenue south-west.	Ninth to Twelfth.....	Grade and lay stone block pavement.	14,070 00
Water southwest .....	Twelfth to fourteenth .....	Lay stone pavements, curb, gutters, and sidewalks.	14,920 00
Eleventh northwest.....	Ohio avenue to B.....	do .....	3,030 00
Four-and-a-half southwest	Pennsylvania avenue to K...	Lay stone pavement .....	47,910 00
East Market Space .....	Georgetown .....	Grade, lay cobble pavement, and wooden bridges over canal.	1,666 00
Sixth southeast .....	South Carolina avenue.....	Complete McAdam .....	6,000 00

APPENDIX P 12.—Statement of character and extent of street pavements in Washington and Georgetown July 1, 1879.

## WASHINGTON.

Street.	From—	To—	Carriage-way.						Remarks.	
			Width.	Concrete.	Granite.	Wood.	Cobble and blue rock.	Macadam.		Gravel.
			Feet.	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.	
North Capitol	B street north.	C street north.	50				1,700			
Do	C street north.	Boundary.	50							34,725
South Capitol	B street south.	M street south.	50							22,556
Do	M street south.	N street south.	50				3,243			
Do	N street south.	River.	50							13,330
1st street east.	B street north.	B street south.	50	6,160						
Do	do	C street north.	35		2,100					
Do	C street north.	K street north.	35						9,994	
Do	B street south.	Boundary.	35							9,431
Do	C street south.	C street north.	35		2,077					
Do	Canal.	Canal.	35					5,639		
Do	Canal.	River.	35							9,722
1st street west.	Pennsylvania avenue.	Indiana avenue.	56			4,666				
Do	Indiana avenue.	F street north.	40			3,150				
Do	G street north.	H street north.	32			1,493				
Do	H street north.	I street north.	32	700		487			1,124	
Do	I street north.	K street north.	32							11,022
Do	Boundary.	Boundary.	32							
Do	Pennsylvania avenue.	Maryland avenue.	53			2,500				
Do	Maryland avenue.	M street south.	35		11,204					
Do	N street south.	River.	34			2,308				14,733
2d street east.	East Capitol.	Maryland avenue.	32						9,707	
Do	Maryland avenue.	H street north.	32							7,929
Do	H street north.	Boundary.	32							
Do	East Capitol.	D street south.	35			7,025				
Do	D street south.	Canal.	35							6,708
2d street west.	Canal.	River.								4,620
Do	Pennsylvania avenue.	New Jersey avenue.	32			14,966				
Do	B street south.	Maryland avenue.	32			1,100				
Do	do	C street south.	32							24,900
Do	D street south.	River.	32							3,200
			32							



APPENDIX P 12.—Statement of character and extent of street pavements in Washington and Georgetown July 1, 1879—Continued.

## WASHINGTON—Continued.

Street.	From—	To—	Carriage-way.					Gravel.	Unimproved.	Remarks.
			Width.	Concrete.	Granite.	Wood.	Cobble and blue rock.	Macadam.		
			Feet.	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.	Sq. yds.	
7th street east.....	Massachusetts avenue ..	Boundary.....	32							
Do .....	East Capitol .....	Pennsylvania avenue ..	32							
Do .....	Pennsylvania avenue ..	D street south .....	32			890				Unimproved from Maryland avenue to Massachusetts
Do .....	D street south .....	M street south .....	32			496				avenue.
7th street west (west side)	Market Space .....	D street north .....	18							O. c. walk, curb, and gutter.
7th street west .....	Pennsylvania avenue ..	do .....	50	1,579						A to Pennsylvania avenue.
Do .....	D street north .....	Q street north .....	50		26,023					
Do .....	D street north .....	Boundary .....	50				1,500			
Do .....	Pennsylvania avenue ..	Water street .....	50		24,107					O. c. walk, curb, and gutter.
8th street east.....	East Capitol .....	I street north .....	40							
Do .....	I street north .....	Boundary .....	40							
Do .....	East Capitol .....	Pennsylvania avenue ..	40			1,600				O. c. walk, curb, and gutter.
Do .....	Pennsylvania avenue ..	D street south .....	40							
Do .....	D street south .....	K street south .....	55		10,124					
Do .....	K street south .....	M street south .....	55			3,178				
8th street west .....	C street south .....	E street north .....	51			3,624				
Do .....	E street north .....	F street north .....	51	1,963						
Do .....	F street north .....	Mount Vernon Place ..	30			3,910				
Do .....	G street north .....	do .....	30							
Do .....	Crossing .....	L street north .....	30	833						
Do .....	Mount Vernon Place ..	N street north .....	30			1,193				
Do .....	L street north .....	R street north .....	30	3,610						
Do .....	N street north .....	Boundary .....	30			5,670				
Do .....	R street north .....	Water street .....	35							
Do .....	B street south .....	Boundary .....	35							
9th street east.....	East Capitol .....	Boundary .....	32							
Do .....	do .....	Pennsylvania avenue ..	32							Gravel from H to L. O. c. walk, curb, and gutter, E. Capitol to G.
Do .....	Pennsylvania avenue ..	B street north .....	51							
Do .....	do .....	P street north .....	50	22,700		2,146				
Do .....	P street north .....	Boundary .....	50			9,922				O. c. walk, curb, and gutter.



Do	B street south	Water street	32	7,680	O. c. walk, curb, and gutter. Intersection of Maryland ave- nue included in Maryland assessable improvement. (O. c. walk, curb, and gutter. Do. Trap rock.
10th street east	East Capitol	Boundary	32	1,067	
Do	do	Pennsylvania avenue	32		
Do	Pennsylvania avenue	M street north	32		15,367
10th street west	do	B street north	31		15,644
Do	do	F street north	31		
Do	B street north	F street north	31	3,683	
Do	F street north	G street north	32	1,372	2,301
Do	G street north	M street north	32		956
Do	M street north	R street north	32	9,031	
Do	R street north	Boundary	32		8,067
Do	V street south	Water street	32		
Do	do	Maryland avenue	32		5,155
11th street east	East Capitol	Boundary	32		
Do	do	Pennsylvania avenue	32		
Do	Massachusetts avenue	do	30		
11th street west	Pennsylvania avenue	River	36		8,444
Do	do	B street north	35		
Do	do	F street north	35		
Do	F street north	G street north	35	2,527	
Do	G street north	L street north	35	1,734	
Do	L street north	K street north	35		11,721
Do	K street north	O street north	35	5,434	
Do	O street north	Rhode Island avenue	35	875	
Do	Rhode Island avenue	Boundary	32		3,892
Do	B street north	Water street	32		2,372
Do	do	Boundary	32		3,800
12th street east	Lincoln Square	Water street	40	10,910	
Do	do	Boundary	32		11,263
12th street west	Pennsylvania avenue	River	32		
Do	do	Ohio avenue	32		15,076
Do	F street north	F street north	38	3,500	17,956
Do	F street north	N street north	38	1,292	
Do	N street north	Rhode Island avenue	32	1,627	
Do	Rhode Island avenue	Boundary	32	13,039	
Do	B street north	Boundary	32		3,271
13th street east	East Capitol	Water street	40		
Do	do	Boundary	32	15,133	11,947
13th street west	Pennsylvania avenue	Boundary	32		
Do	do	F street north	32		
Do	F street north	F street north	40	685	
Do	B street north	K street north	40	1,741	
Do	do	Pennsylvania avenue	40	17,888	
Do	K street north	Circle	32	4,066	
Do	do	Boundary	32	8,090	
Do	B street south	Maryland avenue	40		13,145
Do	Maryland avenue	Water street	32	5,706	
13 1/2 street west	Pennsylvania avenue	B street north	35		1,636
Do	do	Maryland avenue	32		4,472
14th street east	East Capitol	Boundary	32		4,538
Do	do	Boundary	32		11,698

APPENDIX P 12.—Statement of character and extent of street pavements in Washington and Georgetown July 1, 1879.—Continued.  
WASHINGTON.

Street.	From—	To—	Carriage-way.						Unimproved.	Remarks.
			Width.	Concrete.	Granite.	Wood.	Cobble and blue rock.	Macadam.	Gravel.	
			<i>Feet.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>
14th street east.....	East Capitol	River.....	32							
14th street west.....	B street north	B street north	70	12,444						14,791
Do.....	do	Circle.....	70	17,733			10,218			
14th street west (east side).	F street north	Boundary	70	23,076						
14th street west (west side).	do	do				17,120				
14th street west.....	B street south	Water street	40				5,880			12,196
14th street east.....	East Capitol	Boundary	32							13,796
Do.....	do	River.....	32							
15th street west.....	Pennsylvania avenue.	B street north	43			6,800				
Do.....	New York avenue	New York avenue	54	4,478						
Do.....	do	If street north	50	7,361						
Do.....	K street north	K street north	40	3,440						
Do.....	Rhode Island avenue	Rhode Island avenue	32			6,380				
Do.....	do	do	32							
Do.....	T street north	Boundary	32	9,600		4,445				
Do.....	Pennsylvania avenue	If street north	40	1,967						5,973
15th street east.....	East Capitol	C street north	32							8,782
Do.....	do	Kentucky avenue	32							
16th street west.....	If street north	Boundary	50	2,196		57,534				
16th street east.....	Pennsylvania avenue.	If street north	32							4,196
17th street east.....	East Capitol	C street north	32							12,089
Do.....	do	River.....	32							
17th street west.....	B street north	K street north	32							
Do.....	I street north	P street north	32	16,730						
Do.....	P street north	Q street north	32	10,488						
Do.....	Q street north	B street north	32							
Do.....	R street north	Boundary	32						1,600	
18th street east.....	East Capitol	C street north	32							Q. c. walk, curb, and gutter.
Do.....	do	Country	32							O. c. walk, curb, and gutter,
18th street west.....	B street north	E street north	32							from T to Boundary.
Do.....	E street north	New York avenue	40	900						

[illegible]

Cobble from K to Pennsylvania  
avenue.

APPENDIX P 12.—Statement of character and extent of street pavements in Washington and Georgetown July 1, 1879.—Continued.

## WASHINGTON.

Street.	From—	To—	Carriage-way.						Remarks.		
			Width.	Concrete.	Granite.	Wood.	Coarse and blue rock.	Macadam.		Gravel.	Unimproved.
26th street west.....	G street north.....	K street north.....	Feet. 32	Sq. yds. .....	Sq. yds. .....	Sq. yds. .....	Sq. yds. 4,377	Sq. yds. .....	Sq. yds. .....	Sq. yds. .....	From Pennsylvania avenue to K, wood, Street 8.
Do.....	Pennsylvania avenue.....	M street north.....	32	921	.....	.....	.....	.....	.....	8,651	Concrete full width to 4th, south side to 9th. Full width 9th to 11th; north side 4th to 9th.
27th street west.....	E street north.....	L street north.....	32	.....	.....	.....	.....	.....	.....	.....	
Columbia.....	O street north.....	Q street north.....	30	2,500	.....	.....	.....	.....	.....	.....	
East Capitol.....	1st street east.....	9th street east.....	50	10,511	.....	.....	.....	.....	.....	.....	O. c. walk, curb, and gutter from 4th to 11th.
Do.....	4th street east.....	.....do.....	50	.....	.....	6,077	.....	.....	.....	.....	
Do.....	11th street east.....	Eastern Branch.....	50	.....	.....	.....	.....	.....	.....	25,822	
A street north.....	1st street east.....	2d street east.....	35	.....	.....	3,186	.....	.....	.....	.....	Gravel from Maryland to Massachusetts avenues.
Do.....	2d street east.....	4th street.....	35	.....	.....	.....	.....	.....	.....	2,788	
Do.....	4th street.....	Eastern Branch.....	35	.....	.....	.....	.....	.....	.....	26,500	
A street south.....	1st street east.....	3d street east.....	35	.....	.....	3,397	.....	.....	.....	.....	O. c. walk, curb, and gutter from 4th to 11th.
Do.....	3d street east.....	5th street east.....	35	.....	.....	.....	.....	.....	.....	8,750	
Do.....	Pennsylvania avenue.....	Eastern Branch.....	35	.....	.....	.....	.....	.....	.....	14,800	
B street north.....	Massachusetts avenue.....	Maryland avenue.....	46	6,455	.....	.....	.....	.....	.....	.....	Gravel from Maryland to Massachusetts avenues.
Do.....	Maryland avenue.....	Eastern Branch.....	32	.....	.....	.....	.....	.....	.....	6,000	
Do.....	New Jersey avenue.....	Pennsylvania avenue.....	45	4,282	.....	.....	.....	.....	.....	22,000	
B street south.....	New Jersey avenue.....	Pennsylvania avenue.....	45	.....	.....	.....	.....	.....	.....	.....	O. c. walk, curb, and gutter.
Do.....	Pennsylvania avenue.....	5th street east.....	35	.....	.....	3,491	.....	.....	.....	2,998	
Do.....	5th street east.....	7th street east.....	35	.....	.....	.....	.....	.....	.....	4,946	
Do.....	Do.....	12th street east.....	35	.....	.....	.....	.....	.....	.....	13,945	O. c. walk, curb, and gutter.
Do.....	Do.....	Eastern Branch.....	32	.....	.....	.....	.....	.....	.....	.....	
B street north.....	12th street east.....	7th street west.....	56	.....	.....	.....	.....	.....	.....	.....	
Do.....	6th street west.....	12th street west.....	101	.....	.....	.....	.....	.....	.....	.....	O. c. walk, curb, and gutter.
Do.....	Do.....	17th street west.....	60	.....	.....	18,200	.....	.....	.....	18,680	
Do.....	12th street west.....	25d street west.....	60	.....	.....	.....	.....	.....	.....	.....	
Do.....	Do.....	Delaware avenue.....	46	.....	.....	5,111	.....	.....	.....	.....	O. c. walk, curb, and gutter.
Do.....	1st street west.....	3d street west.....	35	.....	.....	3,365	.....	.....	.....	.....	
Do.....	Do.....	New Jersey avenue.....	35	.....	.....	1,350	.....	.....	.....	.....	
B street south.....	Do.....	Maryland avenue.....	35	.....	.....	.....	.....	.....	.....	.....	O. c. walk, curb, and gutter.
Do.....	Do.....	4th street west.....	32	12,840	.....	.....	.....	.....	.....	.....	
Do.....	6th street west.....	3d street east.....	32	.....	.....	.....	.....	.....	.....	.....	
C street north.....	Delaware avenue.....	.....	38	.....	.....	4,692	.....	.....	.....	.....	

From Pennsylvania avenue to K, wood Sheet 8.

Concrete full width to 4th, south side to 9th. Full width 9th to 11th; north side 4th to 9th.

O. c. walk, curb, and gutter from 4th to 11th.

Gravel from Maryland to Massachusetts avenues.

O. c. walk, curb, and gutter.







APPENDIX P 12.—Statement of character and extent of street pavements in Washington and Georgetown July 1, 1879—Continued.

## WASHINGTON—Continued.

Street.	From—	To—	Carriage-way.						Remarks.	
			Width.	Concrete.	Granite.	Wood.	Cobble and blue rock.	Macadam.		Gravel.
K street south.	South Capitol.	Water street.	Feet. 50	Sq. yds. 32	Sq. yds. 32	Sq. yds. 32	Sq. yds. 32	Sq. yds. 32	Sq. yds. 32	O. c. walk, curb, and gutter from 1st to 2d streets.
L street north.	North Capitol.	Boundary.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter from 3d to 5th, and 7th to 9th streets.
L street south.	South Capitol.	Eastern Branch.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
L street north.	North Capitol.	New Jersey avenue.	36	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	New Jersey avenue.	4th street west.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	4th street west.	6th street west.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	6th street west.	8th street west.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	8th street west.	11th street west.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	11th street west.	20th street west.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	20th street west.	Pennsylvania avenue.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	26th street west.	Rock Creek.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	South Capitol.	Water street.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
L street south.	South Capitol.	Water street.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
M street north.	North Capitol.	1st street east.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter from 1st to 6th streets.
Do.	1st street east.	Boundary.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	4th street east.	4th street west.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	do.	Eastern Branch.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	4th street west.	Water street.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	New Jersey avenue.	New Jersey avenue.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	New Jersey avenue.	14th street west.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	14th street west.	14th street west (circle).	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	14th street west (circle).	16th street west.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	16th street west.	New Hampshire avenue.	40	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	New Hampshire avenue.	26th street west.	40	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	26th street west.	Boundary.	40	32	32	32	32	32	32	O. c. walk, curb, and gutter.
N street north.	North Capitol.	Boundary.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
N street south.	3d street east.	6th street west.	35	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	9th street east.	Eastern Branch.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
N street north.	North Capitol.	New Jersey avenue.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	New Jersey avenue.	9th street west.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	9th street west.	11th street west.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	11th street west.	Rhode Island avenue.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.
Do.	14th street west.	14th street west.	32	32	32	32	32	32	32	O. c. walk, curb, and gutter.



Do	Massachusetts avenue	21st street west	32	6,700			7,189
Do	21st street west	Rock Creek	32				4,622
O street north	North Capitol	Boundary	32				5,335
O street north	South Capitol	Eastern Branch	32				6,172
Do	North Capitol	New Jersey avenue	32				
Do	New Jersey avenue	13th street west	32	14,530			
Do	15th street west	16th street west	32	1,513			
Do	16th street west	17th street west	32		1,710		
Do	20th street west	Rock Creek	32				4,295
O street south	South Capitol	Water street	32				8,539
L street north	North Capitol	5th street west	32		2,665		
P street north	North Capitol	Boundary	32				2,310
P street south	South Capitol	Eastern Branch	32				2,490
P street north	North Capitol	New Jersey avenue	32				5,417
Do	New Jersey avenue	19th street west	32		24,743		
Do	20th street west	22d street west	32		3,481		
Do	22d street west	Rock Creek	40	674			
P street south	South Capitol	Water street	30				9,000
Q street north	Boundary	Canal	30				4,246
Do	5th street west	14th street west	32				4,750
Do	14th street west	16th street west	32				
Do	16th street west	19th street west	32	4,028		11,776	
Do	21st street west	22d street west	32				6,048
Q street north	South Capitol	Arsenal	30	1,500			4,367
Do	Boundary	9th street west	32			9,383	
Do	14th street west	14th street west	32		7,555		
Do	16th street west	Boundary	32	4,502			9,967
R street south	South Capitol	Arsenal	30				4,900
S street north	New Jersey avenue	Vermont avenue	32			8,117	
Do	Vermont avenue	16th street west	32	8,811			8,967
Do	16th street west	Boundary	32				4,900
S street south	South Capitol	Arsenal	30				
T street north	Vermont avenue	Vermont avenue	32			5,170	
U street north	2 street west	Boundary	32		13,986		3,620
U street south	Vermont avenue	Arsenal	30				14,180
V street north	Vermont avenue	Eastern Branch	32				3,633
V street south	Vermont avenue	Boundary	32				13,235
W street north	Arsenal	Eastern Branch	30				3,134
Boundary	Boundary	Boundary	32				10,310
Do	Massachusetts avenue	9th street west	46		46,000		
Do	7th street west	do	45		2,750		
Do	6th street west	7th street west	46		3,065		
Do	do	15th street west	46				
Grant Place	9th street west	15th street west	24	1,424			5,662
De Sales street	17th street west	10th street west	46	2,493			54,248
Corcoran street	13th street west	Connecticut avenue	30	2,067			
Do	14th street west	14th street west	40				
Do	14th street west	17th street west	24	1,778		1,134	
Sampson street	15th street west	do	24	2,674			

O. & walk curb, and gutter  
17th to 19th streets.

Gravel from 6th to 8th streets.



O. c. curb: width, 120 feet.  
Virginia avenue, from 3d street  
to 4th street, new width.

Including circle.

Two roadways of 29 feet each.

Do	8th street west	Massachusetts avenue	50				17,225
Georgia avenue	19th street east	Eastern Branch	50				35,556
Kentucky avenue	Lincoln square	do	50				24,445
Tennessee avenue	do	15th street east	50				15,560
Virginia avenue	2d street east	do				46,665	21,335
Do	11th street east	Eastern Branch					
Do	South Capitol	7th street west	50			20,556	
Do	7th street west	B street south	50				9,445
Do	B street north	G street north	50			21,110	
Do	G street north	27th street west	50				9,167
New Hampshire avenue	do	do	50				3,000
Do	do	G street north	50			7,967	
Do	Pennsylvania avenue	M street north	50				
Do	do	Q street north	50			10,283	
Do	M street north	Boundary	50				
Do	Q street north	do	50				
Connecticut avenue	H street north	do	50				
Massachusetts avenue	9th street west	do	50				
Do	7th street west	do	50				
Do	7th street west	New Jersey avenue	50				
Do	11th street east	11th street east	50				
Do	11th street east	19th street east	50			13,585	
Rhode Island avenue	M street north	16th street west	50				32,225
Do	do	5th street west	50				29,000
Vermont avenue	H street north	I street north	50			25,775	
Do	I street north	Q street north	93				
Do	K street north	Boundary	50			4,156	
Do	Q street north	do	50			1,300	
Do	19th street west	23d street west	50			16,454	
New York avenue	Do	17th street west	50				
Do	18th street west	15th street west	50			3,766	16,110
Do	15th street west	14th street west	50			3,424	11,388
Do	7th street west	do	86			15,661	
Do	do	New Jersey avenue	50				
Do	New Jersey avenue	North Capitol	50			11,250	
New Jersey avenue	B street north	D street north	50				8,890
Do	C street north	do	60				
Do	D street north	H street north	60			1,177	
Do	H street north	O street north	60			13,900	
Do	O street north	Boundary	50			20,500	
Do	B street north	E street south	50				12,775
Do	E street south	Canal	50			665	
Do	do	do	50			7,519	
Delaware avenue	B street south	M street south	50				
Do	C street north	C street north	50			3,330	6,888
Do	Boundary	Boundary	50				
One-half street east	B street south	P street south	50				3,000
Water street, half way	H street south	Eastern Branch	50				32,775
between O st. and P st.	do	do	30				10,000
to 12th street west.	do	do	50			20,277	
Defrees street	1st street west	North Capitol	22.5				1,937
New York avenue	North Capitol	Boundary	50				7,777
26th street west	K street west	Pennsylvania avenue	32			1,508	
Union street	M street south	O street south	40			5,333	

APPENDIX P 12.—Statement of character and extent of street pavements in Washington and Georgetown July 1, 1870.—Continued.

## WASHINGTON—Continued.

	From—	To—	<div style="text-align:center;">Carriage-way.</div>							Remarks,
Street.			Width.	(Concrete.)	Granite.	Wood.	Cobble and blue rock.	Macadam.	(Travel.)	Unimproved.
			<i>F feet.</i>	<i>Sq. yds.</i>	<i>Sq. yds.</i>	<i>Sq. lbs.</i>	<i>Sq. yds.</i>	<i>Sq. lbs.</i>	<i>Sq. yds.</i>	<i>Sq. lbs.</i>
Riggs street.....	12th street west....	14th street west .....	30	..	..	..	..	..	..	..
French street .....	9th street west ....	10th street west .	30	..	..	..	..	..	..	..
Kingsman court ..	P street north .....	Q street north ...	30	..	..	..	..	..	..	..
Nyrie street .....	North Capitol ..... do .....	1st street east .	20	..	..	..	..	..	..	..
Jackson court.....	" do .....	" do .....	20	..	..	..	..	..	..	..
Vanderpool street ..	12th street west ..	14th street west ..	50	..	..	..	..	..	..	..
Washington street ..	Waler street .....	16th street west ..	35	..	..	..	..	..	..	..
	4th street west ....	5th street west ..	35	..	..	..	..	..	..	..
				35				3,850		5,556

GEORGETOWN.

Bridge street.	Rock Creek.	Congress street.		9, 026					
Do . . .	Congress street.	Lingan street.	50						
Water street.	Rock Creek.	Avesduet.	50	13, 084					
Oliver do.	Do.	Montgomery.	44						1, 366
High do.	Do.	Washington.	30				1, 823		
Prospect street.	Do.	Potomac.	30				2, 000		
Do.	Do.	Lingan.	30						
Gay street.	Rock Creek.	Montgomery.	30				1, 030		
Do.	Montgomery.	High.	30			5, 523			
1st street.	High.	Fayette.	30			5, 584			
Do.	Fayette.	Warren.	30						2, 283
2d street.	High.	Fayette.	30			4, 305			
Do.	Fayette.	Warren.	30						2, 283
Dunbarton street.	Rock Creek.	Monroe.	30						1, 166
Do.	Do.	Green.	30				2, 000		
Do.	Green.	Congress.	30						2, 516
Do.	Congress.	High.	30						
Beall.	High.	Montgomery.	30				1, 438		
Do.	Rock Creek.	Rock Creek.	30					6, 083	
3d street.	High.	Warren.	30						3, 166
									6, 434
									O. c. walk, curb and gutter. Cobble from Montgomery to Monroe.
									O. c. walk, curb and gutter.
									Do.
									O. c. walk, curb and gutter from High to Fayette.

[illegible]

APPENDIX P 12.—Statement of character and extent of street pavements in Washington and Georgetown July 1, 1879—Continued.

## SUMMARY STATEMENT.

Carriage way.	Washington.		Georgetown.		Total.		Miles.	Feet.
	Length in feet.	Square yards.	Length in feet.	Square yards.	Length in feet.	Square yards.		
Concrete .....	192,735	926,947	1,450	9,026	194,185	935,973	36.8	.....
Granite and trap rock .....	57,399	283,094	12,475	50,162	69,874	333,256	13.2	.....
Wood .....	115,671	528,425	8,700	30,455	124,371	558,880	23.6	.....
Cobbles and blue rock .....	90,346	385,608	7,775	36,241	107,121	421,849	20.28	.....
Macadam .....	38,230	185,795	350	1,310	38,580	187,105	7.3	.....
Gravel .....	117,317	514,673	5,575	19,693	122,892	534,366	23.27	.....
Unimproved .....	451,440	1,801,922	32,284	102,593	483,724	1,904,545	91.6	.....
Total .....	1,072,138	4,626,494	68,069	249,480	1,140,747	4,875,974	216.05	.....

## APPENDIX P 13.

*Statement of expenditures on various roads and streets in the county and Georgetown, D. C., from June 30, 1878, to July 1, 1879.*

## EASTERN DISTRICT.

Adams and Washington .....	\$9 50	Magnolia avenue .....	130 04
Bennings .....	248 78	Pierce's Mill .....	183 50
Bowen .....	78 45	Piney Branch .....	45 15
Good Hope .....	481 27	Queen's Chapel .....	168 40
Hunter .....	275 00	Riggs .....	269 75
Harrison street .....	48 56	Rock Creek Church .....	418 64
Jefferson street .....	8 00	Seventh street .....	477 42
Jackson street .....	6 50	Sherman avenue .....	53 75
Kelley .....	24 50	Spring street .....	150 65
Talbert .....	120 74	Sheridan street .....	71 75
Stanton avenue .....	71 05	Soldiers Home .....	28 59
Suit .....	13 75	Sargent .....	204 56
Summer street .....	31 12	Sligo Mill .....	37 65
Sheriff road .....	41 80	Woodley Lane .....	80 15
Sheridan avenue .....	15 74	Sixteenth street .....	6 50
River .....	284 77	Nineteenth street .....	195 42
Nichols avenue .....	523 08	Miscellaneous .....	350 00
Naylor .....	4 50	Blacksmith bill .....	12 92
Monroe street .....	78 02	Material .....	1,249 91
Livingston .....	31 20	Salary .....	900 00
Lacey .....	9 50		
T street, Howardtown .....	6 75		
Wheeler .....	109 45		
Walker .....	351 48		
Washington street .....	40 00		
Watch Branch Bridge .....	129 08		
Smith's Branch Bridge .....	49 74		
Miscellaneous .....	300 00		
Material .....	375 00		
Salary .....	900 00		
	<u>4,667 33</u>		

## MIDDLE DISTRICT.

Bunker Hill .....	\$350 90
Bennings .....	173 65
Blair .....	220 67
Brown .....	7 50
Brentwood .....	109 70
Brightwood .....	7 97
Bates .....	27 04
Bladensburg .....	383 57
Blagden's Mill .....	5 00
Columbia .....	159 26
College Hill .....	11 60
Carpenter .....	13 80
Corcoran .....	75 91
Chase .....	56 30
Centre street .....	12 34
Cedar Lane .....	27 45
Fifth street .....	67 77
Fourteenth street .....	253 27
Glenwood .....	13 75
Harewood .....	82 85
Ivy City .....	12 00
Lincoln avenue .....	291 27
Linnean Hill .....	5 00
Mount Pleasant .....	29 40
Military .....	29 67
Montello .....	52 35
Milk House Ford .....	23 76

## WESTERN DISTRICT.

Murdock .....	\$36 25
Brookville .....	310 37
Broad Branch .....	691 24
Blagden's Mill .....	25 35
Chappel .....	21 00
Canal .....	621 87
Daniels .....	65 88
Falls .....	15 00
Fox Lane .....	2 50
Grant .....	809 11
Milk House Ford .....	17 75
Military .....	61 25
New .....	71 41
New-cut Road .....	212 46
Pierce's Mill .....	739 38
Red Lane .....	97 38
River .....	138 00
Ridge .....	119 37
Swart .....	31 25
Woodley Lane .....	675 81
Blacksmith bill .....	19 11
Material .....	415 40
Salary .....	900 00
	<u>6,097 14</u>

## GEORGETOWN DISTRICT.

Streets and roads .....	\$5,989 46
Salary .....	900 00
Material .....	950 00
Material .....	38 82
	<u>7,878 23</u>

## GEORGETOWN DISTRICT.

Alleys .....	\$283 81
	<u>283 81</u>

# 468 REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA.

## RECAPITULATION.

Eastern district .....	\$4,667 33
Middle district .....	7,525 58
Western district .....	6,097 14
Georgetown district .....	8,162 09
Total .....	26,452 14

## APPENDIX P 14.

*Schedule of bids opened August 2, 1878, for constructing a sewer on east side of First street, between C and D streets, southeast.*

Names.	327 feet 18-inch pipe sewer, with brick outlet.		327 feet 2-foot brick sewer.		Aggregate.	Remarks.
	Per lineal foot.	Total cost.	Per lineal foot.	Total cost.		
Stafford, J. G. ....	\$1 24	\$405 48	\$1 86	\$608 20	\$1,013 68	
Coyle, B. J., & Co. ....	1 87	611 49	2 48	810 96	1,422 45	
Gannon, James .....	1 52	497 04	1 83	598 41	1,095 45	
Groat, W. H. ....	1 54	503 58	2 05	670 35	1,173 93	
O'Hare, O. ....	2 50	817 50	2 86	935 22	1,752 72	
Maloney, P. ....	1 65	539 55	2 08	680 16	1,219 71	
Williams & Humber .....	1 54	503 58	2 03	663 81	1,167 39	
Hurley, ——— .....						Informal.

*Schedule of bids opened August 3, 1878, for paving, with granite blocks, Seventh street, between D and L streets, northwest.*

Names.	20,152 square yards granite block.		Remarks.
	Per yard.	Total cost.	
Carmony, Simon. ....	\$2 37	\$47,760 24	
Gleason, Andrew, and Ed. Kelley .....	2 61	52,596 72	
McMahon, E., and Green, J. C. ....	2 65	53,402 80	
Ross, W. L. ....	2 65	53,402 80	
Do .....	2 79½	56,324 84	Richmond granite. Cape Ann granite.
Mohler, William H., & Co. ....	2 69	54,208 88	
Johnson, Joseph, and Nolan, M. J. ....	2 69	54,208 88	
Williams & Humber .....	2 70	54,410 40	
Taylor, Jonathan. ....	2 73	55,014 96	
Kirby, Thomas .....	2 75	55,418 00	
Neitzey, George, and Joyce, Thomas. ....	2 79	56,224 08	Richmond granite.
Do .....	2 94	59,246 88	Maine granite.
Do .....	3 25	65,494 00	Cape Ann granite.
McGowan, M. A., and Downing, W. B. ....	2 82	56,828 64	
Buckley, William, and AtLee, G. Y. ....	2 80	56,425 60	
Eslin, Charles H. ....	2 85	57,439 20	
Draney, F. M. ....	2 87½	57,939 70	
Do .....	3 00	60,456 00	
Cranford, Hoffman & Filbert .....	2 93	59,045 36	
Stafford, J. G. ....	2 97	59,851 44	
Murdock, W. C. ....	3 02	60,850 04	
Bullock, George A. ....	3 06	61,665 12	
Abrams, G. B., and J. W. Camp .....	3 12	63,074 24	
Do .....	3 32	66,904 64	
Frell and McNamara .....	3 20	64,486 40	
O'Hare & Brennan. ....	3 22	64,889 44	
Birch, Henry .....	3 27	65,897 04	
Do .....	3 62	72,950 24	
McKnight, J. W. ....			Informal.
Hess, J. C. ....			Do.
McCaim, Thomas .....			Do.
Guidet, Charles .....			Do.



Schedule of bids opened August 15, 1878, for laying asphaltum pavements in the city of Washington, D. C.

Names.	Fourteenth street, between H and Boundary streets, 23,791 square yards.		East Capitol street, between First and Ninth streets, east, 10,160 square yards.		Number of cubic yards of asphaltum to be composed.	Remarks.
	Price per yard.	Total cost.	Price per yard.	Total cost.		
Murdock, W. C.	\$1.97 $\frac{1}{2}$	\$47,046.70	\$2.04 $\frac{1}{2}$	\$20,679.75	50 to 70	Sand, stone dust, residuum petroleum.
Do.	2.07	49,247.30	2.12	21,412.60	40 to 60	Sand, stone dust, paraffine oil.
Gleason & Kelley	2.14 $\frac{1}{2}$	51,031.69	2.14 $\frac{1}{2}$	21,664.50	49	22 per cent. asphalt, sand, stone dust, residuum petroleum.
Do.	2.19	52,102.29	2.19	22,119.00	49	22 per cent. asphalt, sand, stone dust, cement, residuum petroleum.
Crauford, Hoffman & Filbert	2.19	52,102.29	2.19	22,119.00	Not given.	Sand of two qualities.
Do.	2.31	54,957.21	2.31	23,317.00	.....do	Two parts of fine sand and one part gneiss or blue-stone dust, cement, sulphur and petroleum.
Do.	2.47	58,763.77	2.47	24,947.00	.....do	Two qualities of sand, limestone dust, cement, lime, sulphur, petroleum.
Draney & Phillips	2.19	52,102.29	2.19	22,119.00	70	Fine sand and powdered limestone dust, residuum petroleum.
Williams, Joseph	2.20	52,340.20	1.90	20,069.00	About 60	Sand, asphaltic pitch and oil.
Baldwin, J. S., & Co.	2.28 $\frac{1}{2}$	54,362.43	2.39	24,139.00	.....do	Two parts asphalt and 82 parts of sand.
Do.	2.30	54,719.30	2.28 $\frac{1}{2}$	23,078.75	.....do	Will do East Capitol street for \$2.28 $\frac{1}{2}$ if both streets are awarded to them.
Pellatier & Davis	2.33 $\frac{1}{2}$	55,551.98	2.33 $\frac{1}{2}$	23,725.00	.....do	No written specifications.
Taylor, Jonathan	2.33 $\frac{1}{2}$	55,551.98	2.33 $\frac{1}{2}$	23,725.00	50 to 54	One part sharp and one part flat sand, residuum petroleum.
Do.	2.48 $\frac{1}{2}$	59,120.63	2.48 $\frac{1}{2}$	25,098.50	.....do	Sharp and flat sand, limestone dust, cement, residuum petroleum.
Bailey French Paving Company	2.35	55,968.85	2.40	25,220.00	60 to 65	75 to 80 per cent. asphaltum, asphaltic oil, and oil of pitch.
Grant & Kirby	2.39	56,860.49	2.44	24,644.95	.....do	Sand, Peckskill gravel, limestone.
Davis, W. R., & Co.	2.45	58,287.95	2.55	25,755.00	.....do	Indicates confidential letter.
Birch, Henry, & Co.	2.63	62,570.30	2.65	26,765.00	70	Sand, stone dust, ———, petroleum.
Abrams & Lewis	2.49	59,239.59	2.49	25,149.00	.....do	Do. ———, petroleum.
Thompson, Joseph E.	.....	.....	.....	.....	.....	Nonrefracted rock.
Guidet, Charles	.....	.....	.....	.....	.....	Informal.

# 470 REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA.

*Schedule of bids opened August 19, 1878, for stripping and removing arch of Tiber sewer through Botanical Gardens, D. C.*

Names.	486 cubic yards earth to be removed.		486 yards of masonry to be removed.		Aggregate.
	Per yard.	Total.	Per yard.	Total.	
Williams, Joseph.....	\$0 50	\$243 00	\$0 15	\$72 90	\$315 90
Talty, Stephen.....	60	261 60	12	58 32	319 92
Coyle, B. J., & Co.....	68	300 48	18	87 48	387 96
Shipman, J. J.....	74	359 54	10½	52 24	411 88
O'Hare, Owen.....	2 50	1,215 00	47	228 43	1,443 43

*Schedule of bids opened August 19, 1878, for constructing and laying sewers in certain streets in the city of Washington, D. C.*

Names.	Eighth street between Maryland and Massachusetts avenues, northeast, 1,175 feet 3-foot sewer.		Massachusetts avenue between Eighth and Tenth streets, northeast, 800 feet 2-foot sewer.		Massachusetts avenue between Tenth and Eleventh streets, northeast, 300 feet 15-inch pipe.		Aggregate.
	Per foot.	Total.	Per foot.	Total.	Per foot.	Total.	
Gleason & Kelley.....	\$2 24	\$2,632 00	\$1 93	\$1,544 00	\$0 56	\$201 60	\$4,377 60
Himber, Henry.....	2 41	2,831 75	1 73	1,384 00	42	151 20	4,366 75
McNamara, Peter.....	2 45	2,878 75	1 75	1,400 00	37	135 20	4,413 95
Stafford, J. G.....	2 73	3,207 75	1 77	1,416 00	58	206 80	4,830 55
McKnight, J. W.....	2 61	3,066 75	1 89	1,512 00	1 07	385 20	4,963 95
Groat, W. H.....	2 75	3,231 25	1 85	1,480 00	44	158 40	4,869 65
Draney, F. M.....	2 85	3,448 75	2 15	1,720 00	50	180 00	5,348 75
Gannan, James.....	2 97	3,488 75	2 13	1,714 00	50	180 00	5,382 75
Campbell & Murphy.....	3 20	3,760 00	1 87	1,516 00	45	162 00	5,438 00
O'Hare & Brannan.....	3 24	3,807 00	2 00	1,600 00	40	144 00	5,551 00
Coyle, B. J., & Co.....	3 36	3,948 00	2 06	1,648 00	45	162 00	6,328 40
Shipman & Phillips.....	3 58	4,207 50	2 62	2,096 00	79	284 40	6,587 90

*Schedule of bids opened August 22, 1878, for construction brick sewer south side N street, between Fourteenth street and Vermont avenue, northwest.*

Names.	220 feet 30-inch brick sewer.		28 feet 24-inch brick sewer.		153 feet 15-inch pipe sewer-trap connections.		Aggregate.
	Per foot.	Total.	Per foot.	Total.	Per foot.	Total.	
Stafford, J. G.....	\$1 92	\$432 40	\$1 35	\$37 80	\$0 23	\$35 19	\$505 39
Brannan, P.....	2 00	440 00	1 50	42 00	20	30 60	518 60
Groat, William H.....	2 05	451 00	2 35	65 80	25½	39 01	565 81
Desmond, J. J.....	2 19	481 80	1 64	45 92	28½	40 10	567 81
Himber, Henry.....	2 26½	498 30	1 58½	43 34	22½	34 73	576 37
Coyle, B. J. & Co.....	2 28	501 60	2 00	56 00	24	36 72	594 32
Murphy & Campbell.....	2 30	506 00	2 20	61 60	23	35 19	602 79



# 472 REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA.

*Schedule of bids opened October 10, 1878, for repaving bituminous pavements.*

Name.	Wearing surface.	Binder course.	Base course.
	<i>Per sq. yard.</i>	<i>Per cu. yard.</i>	<i>Per cu. yard.</i>
Murdock, W. C .....	\$0 81	\$7 00	\$3 50
Cranford, Hoffman and Filbert .....	63	6 50	3 50
Taylor, Jonathan .....	66½	6 65	2 40

*Schedule of bids opened October 15, 1878, for construction of a culvert over Stickfoot Branch, Sheridan Road.*

Name.	57 cubic yards rubble masonry.		8 cubic yards hydraulic cement.		5,213 brick masonry.		33 square yards cobblestone.		400 feet sheet piling.		600 cubic yards of filling.		Aggregate.
	Per cubic yard.	Total.	Per cubic yard.	Total.	Per thousand.	Total.	Per cubic yard.	Total.	Per foot.	Total.	Per cubic yard.	Total.	
Jas. Reynolds & Co	\$2 75	\$213 75	\$3 00	\$24 00	\$10 00	\$52 13	\$0 30	\$9 90	\$0 10	\$40 00	\$0 18	\$108 00	\$447 78
B. J. Coyle & Co...	4 37	249 09	4 20	33 60	13 00	67 76	20	6 60	03	12 00	18	108 00	447 05
J. J. Shipman ....	3 70	210 90	2 75	22 00	9 50	49 52	55	18 15	1½	7 20	18	108 00	415 77
J. J. Desmond & Co	3 33	189 81	2 44	19 52	11 10	57 86	24	7 92	3¼	15 00	17½	106 50	396 51
James Gannon ...	4 45	253 65	3 87	30 96	13 50	70 37	35	11 55	3	12 00	30	180 00	558 53

# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 473

Schedule of bids for asphaltum pavements, opened October 19, 1878, in the office of the Commissioners of the District of Columbia.

Names.	2,709 square yards, F between Fifth and Eleventh streets, north- west.			1,898 square yards, Third between Latrod and New York avenue, northwest.			1,307 square yards, Sixth between E and F streets, northwest.			1,430 square yards, Eleventh, be- tween D and E streets, north- west.			1,293 square yards, Twelfth, be- tween Pennsyl- vania avenue and E street, north- west.			1,604 square yards, Thirteenth, be- tween B and C streets, north- west.		
	Per yard.	Total cost.	Per yard.	Per yard.	Total cost.	Per yard.	Per yard.	Total cost.	Per yard.	Per yard.	Total cost.	Per yard.	Per yard.	Total cost.	Per yard.	Total cost.	Per yard.	Total cost.
Taylor, Jonathan			\$1 86	\$5,038 74	\$2 20	\$4,175 60	\$1 86	\$2,431 02										
Kirby, Thomas & Co.																		
Davies, W. R., & Co.	\$1 75	\$16,763 25																
Bailey French Paving Company	1 85	17,721 15	2 24	6,081 70	1 87	3,558 75	1 85	2,360 32	\$2 35	\$3,370 50	2 15	2,779 95	2 15	3,448 60				
Murdock, W. C.	1 86	17,816 94	1 96	5,329 95	1 86	3,530 28	1 86	2,431 02	1 86	2,659 80	1 86	2,414 98	1 86	2,983 44				
Baldwin, J. S., & Co.	1 75	16,763 25	1 78	4,822 02	1 78	3,378 44	1 78	2,326 46	1 78	2,545 40	1 78	2,301 54	1 78	2,855 12				
Cranford, Hoffman & Filbert.			1 93	5,228 37	2 05	3,890 90	1 85	2,360 32	2 07	2,967 25	1 79	2,314 47	1 79	2,871 16				
Names.	539 square yards, Thirteenth, be- tween Pennsyl- vania avenue and N street, north- west.			6,169 square yards, Fourteenth, be- tween H street and Circle.			3,898 square yards, Pennsylvania av- enue, between First and Second streets, south- east.			1,186 square yards, Pennsylvania av- enue and Second street, southeast.			599 square yards, Vermont avenue and N street.			11,000 square yards, M, between Sixth and Fourteenth streets, north- west.		
	Per yard.	Total cost.	Per yard.	Per yard.	Total cost.	Per yard.	Per yard.	Total cost.	Per yard.	Per yard.	Total cost.	Per yard.	Per yard.	Total cost.	Per yard.	Total cost.	Per yard.	Total cost.
Taylor, Jonathan																		
Kirby, Thomas & Co.																		
Davies, W. R., & Co.																		
Bailey French Paving Company	\$2 00	\$1,340 00	\$2 00	\$1,118 00	\$2 04	\$12,615 05	2 00	8,575 60	2 20	6,133 30	\$1 89	\$2,229 54						
Murdock, W. C.	1 86	1,246 20	1 86	1,096 74	1 86	11,474 34	2 00	7,796 00	2 00	2,396 00	2 00	2,396 00						
Baldwin, J. S., & Co.	1 80	1,206 00	1 80	1,036 20	1 75	10,795 75	1 86	7,846 71	1 89	2,398 84	1 86	2,305 96	\$2 10	\$1,257 90				
Cranford, Hoffman & Filbert.	1 79	1,199 30	2 10	1,173 90	1 84	11,381 80	1 75	6,821 60	1 78	2,111 08	1 80	2,078 20	1 86	1,114 14				
													2 10	1,257 90				

\* Extra work on Fourteenth street (grading), \$348; extra work on M street, \$5,128.70; extra work on Eleventh street, \$339.

† Extra work on Fourteenth street, \$390; extra work on M street, \$4,307.44; extra work on Eleventh street, \$292. Will lay all asphaltum pavements at \$1.75 per yard.

‡ Extra work on M street, \$2,718.90.



Schedule of bids of granite and compressed asphalt block and McAdam pavements, &amp;c.—Continued.

Names.	Granite block, Tenth, between E and F streets, 1,366 square yards.		Granite block, Eleventh, between E and F streets, 1,734 square yards.		Granite block, Twelfth, between E and F streets, 1,697 square yards.		Granite block, Thirteenth, between E and F streets, 1,740 square yards.		Granite blocks, B street and New Jersey avenue, southeast, 600 square yards.		McAdam, 1,447 square yards, Washington, between West and Stoddard streets.	
	Per yard.	Total cost.	Per yard.	Total cost.	Per yard.	Total cost.	Per yard.	Total cost.	Per yard.	Total cost.	Per yard.	Total cost.
Taylor, Jonathan	\$2 11	\$2,882 26	\$2 11	\$3,658 72	\$2 11	\$3,432 97	\$2 11	\$3,671 40	\$2 35	\$1,410 00		
O'Hare & Brennan	2 68	3,660 88	2 69	4,064 46	2 70	4,392 90	2 71	4,715 40	2 90	1,740 00	\$0 90	\$1,302 30
Reynolds, James											1 04	1,504 80
McNamara, Peter	2 40	3,278 40	2 40	4,161 60	2 40	3,904 80	2 40	4,176 00	2 40	1,440 00		
Williams & Humber	2 23	3,046 18	2 23	3,868 82	2 23	3,628 21	2 23	3,880 20	2 23	1,338 00		
Eslin, Charles H.	2 28	3,114 48	2 28	3,953 52	2 28	3,709 56	2 28	3,967 20	2 28	1,368 00		
Kirby & Co., Thomas												
Nettley & Joyce												
Mohler, Wm. H. (not signed)	2 33	3,182 78	2 33	4,040 22	2 33	3,790 91	2 33	4,054 20	2 33	1,398 00		
Draney, F. M.												
Hussey, William												
Simpson, W. W.												
Steeps, Thomas M.	2 20	3,005 20	2 20	3,814 80	2 20	3,579 40	2 20	3,828 00				
Stafford, John G.												
	2 27	3,100 82	2 28	3,953 52	2 28	3,717 68	2 29	3,984 00	2 23	1,341 00	90	1,302 30
	2 27	3,100 82	2 28	3,953 52	2 28	3,717 68	2 29	3,984 00	2 23	1,341 00	87	1,258 89
	2 52	3,442 32	2 53	4,387 52	2 53	4,134 44	2 54	4,419 60	2 48	1,491 00		
	2 15	2,936 90	2 15	3,728 10	2 15	3,498 05	2 15	3,741 00	2 13	1,290 00		
Ross, W. L.	2 46	3,360 36	2 46	4,265 64	2 46	4,282 00	2 46	4,280 40	2 46	1,476 00		
	2 46	3,360 36	2 46	4,265 64	2 46	4,282 00	2 46	4,280 40	2 46	1,476 00		
Gleason, Andrew*	2 46	3,360 36	2 46	4,265 64	2 46	4,282 00	2 46	4,280 40	2 46	1,476 00		
Shipman, J. J.	2 19	3,001 78	2 19	3,810 46	2 19	3,575 33	2 19	3,823 65	2 24	1,344 00	97	1,410 82
Buckley & Ryan	2 48	3,367 68	2 48	4,300 32	2 48	4,004 96	2 48	4,315 20				
Cranford, Hoffman & Filbert	2 16	2,950 56	2 16	3,745 34	2 16	3,514 32	2 16	3,758 40	2 16	1,296 00	1 95	1,070 78
Robinson, J. P.												
Gannan, James												
Zugg, J. E.											87	1,258 89
											69	998 43

\* Will do all stone work for \$2.23 per square yard.

## Schedule of bids opened November 16, 1878, for laying sewer through squares Nos. 379, 380, 381, and 382.

Names.	Amount.	Remarks.
Edward Kelley	\$2,098 00	Supplemental bid.
Simon Carnody	1,388 00	Original bid.
B. J. Coyle	4,390 00	Informal.
O'Hare & Brennan	4,700 00	
Thomas Joyce	8 00	
Thomas M. Steeps	5,450 00	Per lineal foot, \$5,200.
James Reynolds	3,113 00	

## Schedule of bids opened November 16, 1878, for improvement of N and Kirby streets northwest.

Names.	366 sq. yards cobblestone pavements.		897 sq. yards brick pavement.		1,016 foot bridge-stone, 5 by 26 curb.		1,048 ft. 12-inch gutter-dag.		72 ft. 16-inch bridge-stone.		330 ft. 12-inch sewer pipe.		2 manholes.		1,650 cubic yards grading.		Aggregate.
	Per square yard.	Total.	Per square yard.	Total.	Per lineal foot.	Total.	Per lineal foot.	Total.	Per lineal foot.	Total.	Per lineal foot.	Total.	Each.	Total.	Per cubic yard.	Total.	
F. M. Draney	\$0 19	\$69 54	\$0 35	\$313 95	\$0 45	\$457 30	\$0 21	\$220 08	\$0 06	\$4 32	\$0 47	\$155 10	\$0 25	\$0 75	\$0 15	\$247 50	\$1,468 44
Rynn & Balan	33 34	122 61	48	430 56	49 1	502 82	23	241 04	06	4 32	78	257 40	35	1 05	\$16 35	\$22 70	1,834 97
O'Hare	25	112 50	40	358 80	50	508 00	23	241 04	05	3 60	48	158 40	10	30	18 00	36 00	1,835 64
T. J. Shirk	32	117 12	44	394 68	49	497 80	21	220 08	08	5 76	58	191 40	6	60	35 50	71 00	1,780 88
W. J. Kirby	29	106 14	40	358 80	45	457 20	22	230 56	08	5 76	34	145 20	05	15	14 00	28 00	1,575 31
J. J. Desmond & Co.	22	80 52	42 1/2	381 22	45 1/2	405 28	19	190 12	07	5 04	31	102 30	08	24	14 00	28 00	1,575 31
Bryant & Hasselt	28	102 48	45	403 65	49	497 84	21	220 08	09	6 48	47	155 10	65	1 95	17 50	35 00	1,753 58
J. J. Hill	25	91 50	45	403 65	55	558 80	23	241 04	13	9 30	35	115 50	10	25	17 00	34 00	1,718 09
W. H. Mohler	25	54 00	370 00	370 00	46	467 37	18 1/2	273 00	04	8 00	103 90	108	24	10 00	16	200 00	1,407 15
P. McNamara	23	74 18	35 1/2	348 43	46	467 37	19	199 12	07	2 80	55	115 50	08	24	16 00	32 00	1,906 73
J. G. Stafford	29	106 14	39	349 83	49	497 84	19	199 12	07	5 04	59	194 70	23	69	10	165 00	1,515 23



# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 477

*Schedule of bids opened November 22, 1878, for work at the intersection of Delaware and Massachusetts avenues and First and F streets northeast.*

Names.	Amount.	Names.	Amount.
Draney, F. M. ....	\$574 00	Carmody, S. ....	\$640 00
Kirby, Thomas. ....	576 26	Hussey, William. ....	660 00
Stafford, J. G. ....	589 93	Mohler, W. H. ....	697 50
Hill, J. J. ....	591 44	Steeps, T. M. ....	756 70
Maloney, P. ....	608 00	Gannon, James. ....	765 80

*Schedule of bids opened December 9, 1878, for constructing bridge over Piney Branch, on Fourteenth street road.*

Names.	3,250 feet white pine.		2,200 feet oak.		100 pounds iron bolts.			Remarks.
	Per M. b. m.	Total.	Per M. b. m.	Total.	Per pound.	Total.	Total.	
Desmond, J. J. .	\$34 75	\$112 94	\$35 00	\$77 00	\$0 08	\$8 00	\$197 94	+ for labor, \$80 = \$250.45 (re-cutting old rods, 4 cents per pound).
Draney, F. M. .	40 00	130 00	40 00	88 00	05	5 00	223 00	
King, B. C. ....	29 00	94 25	31 00	68 20	08	8 00	170 45	
Coyle, B. J. ....	57 00	185 25	48 00	105 60	08	8 00	298 85	



Schedule of bids opened March 29, 1879, for construction of sewers, &amp;c.—Continued.

Names.	1,800 lineal feet 8-foot sewer, White Lot.		2,445 lineal feet 6½-foot sewer, 15th st. and N. Y. ave., to 13th st.		825 lineal feet 3-foot sewer, N. Y. avenue, from 13th to 11th sts.		930 lineal feet 4½-foot sewer, from 11th to 9th sts.		500 lineal feet 3-foot sewer, Mc. Vernon Place, from 9th to 7th sts.		Total cost of all sew- ers.	Total cost of outlet and all sewers.
	Per foot.	Total.	Per foot.	Total.	Per foot.	Total.	Per foot.	Total.	Per foot.	Total.		
Edward Kelly,*	\$10 75	\$20,069 40	\$10 72	\$26,210 40	\$5 06	\$4,174 50	\$4 72	\$4,389 00	\$8 48	\$1,948 80	\$56,792	70 \$76,268 33
B. J. Coyle & Co.	14 60	27,136 00	11 40	27,873 00	5 24	4,323 00	4 50	4,185 00	3 60	2,016 00	65,553 00	88,150 10
Z. Jones	13 75	25,575 00	10 69	26,137 05	5 57	4,503 25	5 16	4,798 80	4 50	2,520 00	63,626 10	92,822 50
Henry Ganiz, No. 1†	14 78	27,490 80	11 84	28,948 80	6 00	4,950 00	5 40	5,022 00	4 75	2,660 00	69,071 60	93,403 60
J. W. McKnight & Co.	16 00	29,760 00	10 90	26,650 50	6 00	4,950 00	5 75	5,347 50	4 46	2,497 60	69,205 80	95,559 30
Henry Ganiz, No. 2	15 40	28,644 00	12 20	29,829 00	6 30	5,187 50	5 65	5,254 50	4 95	2,772 00	71,694 00	96,503 00
Thomas Kirby	14 84	27,602 40	13 40	32,763 00	7 00	5,187 50	7 24	6,733 30	4 30	2,408 00	72,472 70	103,489 90
Gleason & Humber	16 95	31,527 00	13 42	32,811 00	6 05	5,486 25	5 81	5,403 30	4 70	2,632 00	74,153 50	105,577 45
Smith & Crawford	15 70	29,202 00	14 53	35,325 85	9 14	5,540 50	8 10	5,301 00	4 75	2,340 00	83,050 95	109,906 25
W. L. Hoblitzell & Co.	21 00	39,000 00	11 00	26,895 00	6 10	5,032 50	5 70	5,301 00	4 75	2,609 00	78,948 50	113,037 20
Thomas Adams	18 86	35,079 60	15 03	36,748 35	7 11	5,865 75	7 04	6,547 20	4 83‡	2,707 60	86,948 50	117,011 60
W. C. Murrelock	17 00	31,620 00	15 00	36,075 00	12 50	10,312 50	11 50	10,621 70	10 50	5,880 00	95,182 50	125,823 25
J. G. Loane	21 104	39,252 14	16 43	40,171 75	6 87	5,667 75	6 69	6,221 70	5 67	3,175 20	94,488 14	129,073 99
R. H. Ryan	20 95	38,967 00	17 45	42,665 25	9 60	7,920 00	8 90	8,279 00	7 40	4,144 00	101,973 25	139,868 65
H. Fairfax & Co.	22 58	41,998 80	18 37	41,914 65	10 66	8,794 50	7 72	7,179 00	5 52	3,091 20	105,978 75	137,476 40
J. V. W. Vanderburgh	20 20	38,688 00	14 75	36,063 75	10 50	8,662 50	10 00	9,300 00	9 50	5,320 00	98,034 25	140,153 75
James Kennedy	26 87	49,978 20	17 75	43,398 75	9 25	7,631 25	7 25	6,742 50	4 75	2,600 00	110,410 70	144,351 45
J. F. Kennedy	25 00	46,500 00	17 75	43,398 75	10 00	8,250 00	8 80	8,184 00	6 90	3,864 00	110,196 75	144,819 05
Shanley & Smith	18 00	33,480 00	15 10	30,919 05	7 14	5,890 50	6 29	5,819 70	5 85	3,276 00	85,415 25	193,833 89
Netzey & Joyce							5 50	5,115 00	4 25	2,380 00	7,495 00	
William Hussey & Co.											31,303 80	
W. H. Groat	16 83	31,303 80									31,322 40	
J. G. Stafford	16 84	31,322 40									3,500 00	75,873 95
Mohler & Reynolds	13 50	25,110 00	13 53	33,080 85	8 32	6,864 00	7 87	7,319 10	6 25	3,500 00	75,873 95	
O'Hare & Brennan	21 50	39,990 00	18 00	44,010 00	10 42	8,596 50	8 70	8,091 00	6 25	3,500 00	104,187 50	

\* Edward Kelly is a failing contractor.

† With adamantinite brick.

‡ No certificate of deposit.

Schedule of bids opened March 29, 1879, for repair of Tiber arch and construction of overflow.

Names.	800 cubic yards excavation.		735 cubic yards brick masonry.		620 cubic yards rubble masonry.		625 cubic yards concrete masonry.		3,300 cubic yards curb and bankment.		3,000 feet lumber, b. m.		90 lineal feet blue-stone coping.		905 square yards sodding.		100 lineal feet brick gutters.		Aggregate.
	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per foot.	Total.	Per foot.	Total.	Per yard.	Total.	Per foot.	Total.	
Smith & Crauford * ..	\$0 16	\$138 00	\$5 88	\$4,674 00	\$3 50	\$2,170 00	\$2 50	\$2,187 50	\$0 20	\$660 00	\$0 07	\$210 00	\$0 15	\$13 50	\$0 25	\$226 25	\$0 75	\$75 00	\$10,344 35
R. J. Coyle & Co. ....	12	96 00	5 35	4,253 25	3 80	2,418 00	5 05	3,156 25	20	660 00	05½	162 00	40	36 00	18	162 90	60	60 00	11,004 40
Watson & Timber .....	27	216 00	6 69	5,318 55	4 42	2,740 40	4 40	2,750 00	30	990 00	02½	75 00	30	27 00	12	108 00	15	15 00	12,240 55
William H. Gaud .....	25	200 00	5 40	4,293 00	4 66	2,889 20	4 80	3,000 00	25	825 00	06	180 00	50	45 00	25	226 25	35	35 00	11,693 45
Robert H. Beaul .....	25	200 00	9 00	7,155 00	7 00	4,340 00	6 21	3,881 25	40	1,320 00	10	300 00	1 00	90 00	30	270 00	30	30 00	15,483 75
James Kennedy † .....	1 50	1,200 00	17 50	13,912 50	9 00	5,580 00	9 50	5,937 50	1 50	4,950 00	04½	135 00	2 00	180 00	50	452 50	1 00	100 00	32,447 50

\* Informal; no certificate inclosed.

† Bid signed after being opened.

; Bid withdrawn.

# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 481

Schedule of bids opened March 29, 1879, for improvement of F Street north, between Second and Seventh streets east.

Names.	18,187 cubic yards grad- ing.			94 lineal feet corners. 3,915 lineal feet 12-inch flag.			1,678 lineal feet 16-inch flag.			1,834 square yards cobble- stones.			4,876 square yards brick pavement.			5,600 square yards gravel roadway.			Total cost of whole work.
	Per Yard.	Total.	Per Foot.	Total.	Per Foot.	Total.	Per Foot.	Total.	Per Yard.	Total.	Per Yard.	Total.	Per Yard.	Total.	Per Yard.	Total.			
Miller & Co.	\$11 00	\$2,000 00	\$0 09	\$14 10	\$156 60	\$0 07	\$117 46	\$0 13	\$238 42	\$0 12	\$585 12	\$0 04	\$224 00	\$3,676 74					
J. G. Stafford	09 1/2	1,773 23	11 1/2	23 50	264 26	09 1/2	130 41	10 1/2	307 19	09 1/2	475 41	00 1/2	378 00	3,825 50					
Mohler & Reynolds	10 1/2	1,935 10	08 3/4	7 52	156 60	06 1/2	100 68	08 1/2	146 72	15 1/2	731 40	09 1/2	304 00	3,904 66					
McNamara & Mahoney	12 1/2	2,723 37	08 3/4	32 90	02 78	06 1/2	67 12	08 1/2	229 08	13 1/2	633 88	06 1/2	364 00	3,972 29					
S. Carmody	14 1/2	2,637 11	08 3/4	37 61	04 156	04 1/2	75 51	06 1/2	119 21	06 1/2	329 13	06 1/2	364 00	4,031 25					
S. Talley	14 1/2	2,546 18	10 3/4	4 70	05 195	07 1/2	117 46	11 1/2	201 74	07 1/2	341 32	05 1/2	280 00	4,065 45					
Thomas Kirby	13 1/2	2,364 31	08 3/4	11 28	04 176	17 06 1/2	100 68	15 1/2	275 10	11 1/2	536 36	06 1/2	336 00	4,102 54					
T. M. Steep	13 1/2	2,397 22	25 1/2	23 50	05 117	45 06 1/2	100 68	12 1/2	289 25	10 1/2	531 08	06 1/2	336 00	4,243 70					
D. Looney	14 1/2	2,692 37	11 1/2	14 10	03 195	75 06 1/2	100 68	12 1/2	289 25	10 1/2	531 08	06 1/2	336 00	4,343 70					
Gleason & Himber	13 1/2	2,652 38	09 3/4	37 61	03 117	45 06 1/2	100 68	13 1/2	298 42	13 1/2	536 36	06 1/2	364 00	4,495 86					
William Hussey & Co.	15 1/2	2,728 05	10 3/4	14 10	03 117	45 06 1/2	100 68	09 1/2	165 06	11 1/2	423 88	10 1/2	500 00	4,504 01					
F. M. Draney	17 1/2	3,182 72	10 3/4	11 28	03 117	45 06 1/2	100 68	09 1/2	165 06	11 1/2	423 88	10 1/2	500 00	4,770 88					
O'Hare & Brennan	16 1/2	3,000 84	09 3/4	14 10	03 117	45 06 1/2	100 68	11 1/2	201 74	09 1/2	438 84	07 1/2	392 00	4,786 33					
Albert Gleason	16 1/2	2,909 92	11 1/2	14 10	03 117	45 06 1/2	100 68	18 1/2	330 12	16 1/2	780 16	08 1/2	416 00	4,863 63					
William Buckley	17 1/2	3,213 03	11 1/2	14 10	05 195	75 07 1/2	117 46	23 1/2	421 82	16 1/2	780 16	08 1/2	416 00	5,108 17					

*Schedule of bids opened April 2, 1879, for south approach of Anacostia bridge, in Uniontown, D. C.*

Names.	200 feet 3- foot brick sewer, com- plete.		50 feet 33- inch brick sewer, com- plete.		120 feet 18- inch sewer, complete.		20 feet 18- inch sewer, complete.		18- foot sewer, complete.		Four drops.		Settling 300 feet blue stone curb.		Laying 300 square yds brick foot- walk.		Laying 900 square yds gravel road- way.		300 cubic yards fill- ing.		218 square yards cob- ble stone gutters.		Total.
	Per foot.	Total.	Per foot.	Total.	Per foot.	Total.	Per foot.	Total.	Per foot.	Total.	Each.	Total.	Per foot.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	
Albert Gleason.....	\$2 00	\$400 00	\$1 75	\$87 50	\$0 25	\$30 00	\$0 40	\$8 00	\$4 00	\$15 00	\$60 00	\$0 10	\$30 00	\$0 12	\$36 00	\$0 14	\$126 00	\$0 22	\$66 00	\$0 15	\$37 20	\$0 40	\$164 20
William Hussey.....	1 67	334 00	1 67	83 50	73 33	57 60	7 33	29 33	14 00	12 00	48 00	16 48 00	12 36 00	45 135 00	14 42 00	14 42 00	10 90 00	14 42 00	15 45 00	35 76 30	25 54 50	35 76 30	930 00
T. M. Steep.....	2 25	450 00	2 40	120 00	80 80	96 00	9 20	36 80	16 00	5 50	10 00	12 36 00	10 30 00	40 120 00	17 51 00	17 51 00	05 45 00	17 51 00	15 45 00	19 41 42	19 41 42	15 45 00	852 42
S. Carmody.....	2 45	490 00	2 30	115 00	85 10	102 00	9 00	36 00	17 00	18 50	74 00	10 30 00	10 30 00	30 117 00	40 120 00	09 81 00	09 81 00	07 21 00	08 17 44	08 17 44	08 17 44	1 062 90	
W. H. Mohler.....	2 40 1/2	481 00	2 21	120 50	80 10	102 00	9 00	36 00	18 00	12 50	50 00	10 30 00	10 30 00	40 120 00	21 63 00	21 63 00	08 72 00	21 63 00	15 45 00	15 45 00	15 45 00	1 062 90	
W. Buckley.....	1 70	340 00	1 70	85 00	80 80	96 00	8 20	32 80	16 40	12 00	48 00	10 30 00	10 30 00	40 120 00	12 36 00	12 36 00	06 54 00	12 36 00	12 36 00	12 36 00	12 36 00	12 36 00	938 50
F. M. Draney.....	1 97	394 00	1 95	97 50	81 92	97 20	8 1	32 40	16 20	12 50	50 00	10 30 00	10 30 00	40 120 00	38 114 00	38 114 00	07 63 00	38 114 00	09 37 00	20 43 60	20 43 60	20 43 60	882 60
McNamara & Ma- loney.....	1 75	350 00	1 68	84 00	75 75	90 00	7 5	30 00	15 00	18 00	72 00	08 24 00	08 24 00	37 111 00	37 111 00	05 45 00	05 45 00	08 34 00	12 47 96	12 47 96	12 47 96	901 56	
Gleason & Humber..	1 97	394 00	1 94	77 00	74 88 80	88 80	7 4	29 60	14 80	18 00	72 00	09 27 00	09 27 00	37 111 00	37 111 00	05 45 00	05 45 00	08 34 00	12 47 96	12 47 96	12 47 96	901 56	

\* Flagging, 50 cents per foot.

# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 483

*Schedule of proposals for cleaning alleys in the cities of Washington and Georgetown during the period from April 15, 1879, to June 30, 1880.*

Names.	Amount of bid.
F. M. Draney .....	\$5,200 00
J. W. Willis (informal) .....	7,212 50
W. H. Mohler .....	5,475 00
Simon Carmody .....	5,545 00
H. J. McLaughlin and J. M. Cushman .....	5,950 00
William Ryan .....	6,000 00
William Buckley .....	6,850 00
M. Fitzgerald .....	7,000 00
J. Cannon .....	8,375 00

*Schedule of bids received and opened in the office of the Engineer Commissioner, District of Columbia, April 24, 1879, for constructing 2-foot brick barrel-sewer on Sixteenth street, between T and Caroline streets, northwest.*

Name of bidder.	Per lineal foot.
W. H. Mohler .....	\$1 53
Simon Carmody .....	1 55
F. M. Draney .....	1 83½
W. H. Groat .....	1 87
Thomas Joyce .....	1 90
William Buckley .....	1 95
W. C. Murdock .....	1 95
Entwistle & Godfrey .....	374 00

\* Complete — \$1.62½ per lineal foot.





Schedule of bids opened May 24, 1879, for improving Twallow road and Back street, Georgetown, D. C.

Names.	12,700 cubic yards earth excavating, including haul of 200 feet.			1,200 cubic yards solid rock exca- vation, includ- ing haul 200 feet.			12,700 cubic yards, hauling over 200 feet, haul 240 feet.			75 cubic yards brick masonry.			215 cubic yards rubble stone masonry.			12,650 square yards gravel- ing roadway.			Aggregate.
	Per yd.	Total.	Per yd.	Total.	Per yd.	Total.	Per yd.	Total.	Per yd.	Total.	Per yd.	Total.	Per yd.	Total.	Per yd.	Total.			
John G. Stafford	\$0 11	\$1,397 00	\$0 58	\$695 00	\$0 00 <sup>1</sup>	\$152 40	\$6 87	\$713 25	\$2 40	\$516 00	\$0 07 <sup>1</sup>	\$917 12					\$4,193 77		
A. B. Burns & Co	10 <sup>1</sup>	1,323 50	75	900 00	00 <sup>1</sup>	152 40	5 50	412 50	3 21	496 65	13	1,644 50					4,939 55		
Chadmore & Maloney	15	1,905 00	75	900 00	00 <sup>1</sup>	228 60	7 25	513 75	3 72	806 25	08	1,012 00					5,395 00		
W. E. Vermillion	15	1,905 00	35	420 00	01 <sup>1</sup>	457 20	6 00	450 00	3 25	698 75	12	1,518 00					5,448 95		
Gannon & Steeples	13 <sup>1</sup>	1,746 25	67	804 00	00 <sup>1</sup>	228 60	6 75	500 25	3 50	752 50	12	1,518 00					5,555 60		
Albert Gleason	16	2,032 00	45	540 00	00 <sup>1</sup>	152 40	6 00	450 00	3 72	806 25	13	1,644 50					5,625 15		
William Buckley	13 <sup>1</sup>	1,714 50	90	1,080 00	00 <sup>1</sup>	152 40	6 38	478 50	4 75	1,021 25	10	1,265 00					6,029 15		
J. J. Shipman	15	1,714 50	42	504 00	00 <sup>1</sup>	295 70	9 40	705 00	3 99	857 85	15 <sup>1</sup>	2,050 18					6,056 23		
Tom Joyce	13 <sup>1</sup>	1,905 00	59	708 00	00 <sup>1</sup>	98 10	6 00	450 00	3 95	849 25	17	2,150 50					6,100 85		
Tom Kirby	14 <sup>1</sup>	1,841 50	60	720 00	00 <sup>1</sup>	132 40	10 75	806 25	4 25	913 75	14 <sup>1</sup>	1,834 25					6,268 15		
Mohler & Reynolds	17	2,150 00	35	420 00	00 <sup>1</sup>	76 20	6 30	487 50	3 29	707 35	25	3,162 50					7,012 55		
John Danaher	24	3,048 00	92	1,104 00	00 <sup>1</sup>	228 60	3 62	421 50	2 34	503 10	23	2,909 50					8,214 70		
P. Daley	17	2,150 00	60	828 00	00 <sup>1</sup>	152 40	7 13	600 00	4 50	967 50	25	3,162 50					6,383 90		

Special bid for McAdam.

† Bid for brick masonry informal.

‡ Per M.

Schedule of bids opened May 29, 1879, for construction of outlet section boundary intercepting ancillary sewer.

Names.	41,000 cubic yards earth excavation.		15,000 cubic yards hauling 100 feet over 200 feet.		4,600 cubic yards concrete masonry.		7,724 cubic yards brick masonry.		3,778 square yards trap-rock masonry.		5,000 feet, in, piling left in trench.		Aggregate.
	Per yd.	Total.	Per 100 feet.	Total.	Per yd.	Total.	Per yd.	Total.	Per yd.	Total.	Per ft.	Total.	
Loane, J. C.	\$0 20	\$8,200 00	\$0 00	\$300 00	\$2 50	\$11,500 00	\$5 00	\$38,620 00	\$2 25	\$8,500 00	\$0 20	\$100 00	\$87,440 00
Gleason & Humber	19 1/2	8,097 50	00 00	300 00	3 32 1/2	15,341 00	5 27	40,705 00	1 80	6,800 40	14	70 00	71,432 38
Smith & Crawford	18	7,580 00	00 00	300 00	3 10	14,500 00	5 49	42,404 76	2 69	10,162 82	17	85 00	74,772 58
Adams, W. H., & Co.	27 1/2	11,253 00	00 00	450 00	3 10	13,662 00	5 17	39,932 08	2 50	9,445 00	15	75 00	74,890 08
Gantz, Henry, & Co.	27 1/2	11,253 00	00 00	450 00	3 10	13,662 00	5 43	41,941 32	2 45	9,250 10	14	70 00	77,837 42
Mohler & Reynolds	15	6,150 00	00 00	300 00	3 35	16,790 00	5 43	41,941 32	3 60	13,000 80	12 1/2	60 65	78,852 77
Coyne, B. J., & Co.	15	6,150 00	00 00	300 00	4 20	19,320 00	6 30	48,661 20	2 20	8,311 60	15	75 00	83,387 80
Wilzey, George	19	7,790 00	00 00	450 00	2 84	13,054 00	6 44	49,742 56	3 25	12,278 50	15	75 00	83,476 05
McHarty, Brennan	15	6,150 00	00 00	300 00	3 20	14,720 00	6 90	53,295 60	2 50	9,445 00	14	70 00	83,890 00
Nash, A. K., & Co.	24	9,840 00	00 00	450 00	3 00	13,800 00	6 20	47,888 80	3 25	12,278 50	12	60 00	84,187 30
Thompson, J. K., & Co.	20	11,800 00	00 00	300 00	4 07	18,722 00	5 32	41,091 68	3 17	11,976 56	22	110 00	84,375 94
Kelly & McMahon	27	11,070 00	80 100 00	00 1/2	4 00	18,550 00	5 75	44,413 00	2 60	9,822 80	18	30 00	86,065 80
Joyce & Bivens	25	10,250 00	1 50 300 00	00 1/2	4 05	18,630 00	5 34	45,860 50	3 20	12,467 40	20	100 00	87,702 90
Vermillion, W. F.	20	8,200 00	40 80 00	00 1/2	4 35	20,010 00	6 00	46,344 00	2 90	10,956 20	07	35 00	91,025 20
Kennedy, James F.	23 1/2	9,512 00	75 150 00	00 1/2	4 82	22,172 00	6 18	47,734 32	3 43	12,858 24	20	115 00	91,534 08
Buckley & Kennedy	20	8,200 00	85 170 00	04	3 80	17,170 00	6 87	53,063 88	3 40	12,845 20	15	65 00	96,220 80
Gleason, Albert	50	13,520 00	1 00 290 00	00 1/2	3 85	17,480 00	7 05	54,454 20	3 69	10,200 00	15	100 00	101,420 00
Morgan & Webster	60	24,600 00	3 35 70 00	00 1/2	3 75	17,250 00	6 25	48,275 00	3 75	11,354 60	18	90 00	131,632 30
Smith, T. G.	1 50	61,500 00	2 00 400 00	01	3 00	17,710 00	3 80	29,737 40	3 00	11,354 60	40	200 00	64,134 40
Murdoch, W. C.	19	7,790 00	1 10 220 00	01 1/2	3 00	13,800 00	3 80	29,737 40	3 00	11,354 60	40	200 00	64,134 40
	28	11,480 00	1 25 250 00				6 47	49,974 28	3 06	10,049 48	25	125 00	

\* Informal; no certificate.



*Schedule of bids opened June 6, 1979, for repairing Seventh Street Road.*

Names.	50, 181 square yards grading with 100 feet haul.		500 square yards, hard 100 feet over 200 feet, 200 feet.		19,357 square yards taking up and re- laying (600 ft) 1 stone gutter.		2,013 square yards new cobblestone gutter.		500 cubic yards gravel furnished and spread.		Aggregate.
	Per yard.	Total.	Per 100 feet.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	
W. E. Vermillion	\$0 02	\$1,183 02	\$0 00½	\$1 25	\$0 02½	\$1,006 93	\$0 19	\$382 47	\$0 30	\$150 00	\$2,813 87
John Cudmore, Jr.	01½	887 71	00½	5 00	00½	1,205 90	27½	558 62	18	90 00	7,897 23
Mohler & Reynolds	03	1,775 43	00½	5 00	00	1,196 22	29	382 47	33	165 00	3,524 12
O'Hare & Brennan	03	1,775 43	00½	5 00	00	1,194 33	28	402 60	50	250 00	4,224 86
Shannon Carowdy	02½	1,226 20	00½	5 00	08½	1,094 64	18	302 34	27	135 00	3,969 91
J. J. Shipman	02½	1,627 47	00½	5 75	14	2,701 18	38	764 94	72	360 00	9,246 16
Gleason & Hubber	03½	2,071 33	00½	2 50	09	1,794 33	24½	498 25	39	195 00	4,826 30
D. Looney	01	501 81	00½	1 25	10½	1,965 70	29	563 15	17	85 00	3,570 15
Barns, Adams & Co.	01½	1,085 66	00½	5 00	10	1,965 70	24	402 60	24	120 00	3,657 48
William Buckley	02½	2,071 33	00½	5 00	10½	1,965 70	24	402 60	40	200 00	4,772 31
Gannon & Steeps	04½	2,515 19	00½	5 00	00½	1,206 38	25½	503 25	39½	197 50	4,728 21
J. Caylor	03	1,775 43	00½	5 00	00½	1,206 38	25	503 25	40	200 00	5,274 86
Alfred Gleason	02½	2,071 33	00½	5 00	14	2,492 44	35	703 25	60	300 00	5,274 52
George Gleason	02	1,833 62	00½	5 00	12	2,492 44	35	703 25	60	300 00	5,186 16
F. M. Draney	05	2,639 65	02½	25 00	16	3,188 92	32½	654 23	65	325 00	7,132 20
George Neitzey	01½	739 76	00½	1 25	08	1,594 46	26	523 38	40	200 00	3,659 35

Schedule of bids opened June 21, 1879, for asphaltum and granite block pavements.

## Asphaltum.

Names.	6,247 square yards, M street, between New Hampshire avenue and Eight- eenth street.		6,308 square yards, New Hampshire avenue, between Pennsylvania av- enue and M street.		6,900 square yards, N street, between Ninth and Four- teenth streets.		9,830 square yards, Massachusetts avenue, between Ninth and Thir- teenth streets.		3,364 square yards, Tenth street, be- tween K and M streets.		3,792 square yards, E street, between First and Fourth streets.	
	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.
Baldwin, J. S.	\$1 60	\$9,995 20	\$1 60	\$10,092 80	\$1 65	\$11,385 00	\$1 65	\$16,219 50	\$1 60	\$5,382 40	\$1 55	\$5,877 60
Murdoch, W. C.	1 64	10,245 08	1 64	10,345 12	1 64	11,316 00	1 64	16,121 20	1 64	5,516 96	1 64	6,218 88
Bailey French Paving Company	1 70	10,619 90	1 70	10,723 60	1 65	11,385 00	1 67	16,416 10	1 67	5,617 88	1 62	6,143 04
McLean, John	2 25	14,055 75	2 25	14,193 00	2 55	15,525 00	2 25	22,117 50	2 25	7,569 00	2 25	8,332 00
Taylor, Jonathan							1 68 <sup>3</sup>	16,588 12				
Cranford, Hoffman & Filbert					1 54	10,626 00	1 54	13,138 20	1 54	5,180 56	1 68 <sup>3</sup>	6,389 52
McKnight, Barnes & Co												
Vermillion, W. E.												
Adams, W. H., & Co.												
Nash, B. K., & Co												
Joyce, Thomas												
Draney, F. M.												
McLaughlin & Cudmore												
Buckley, William												
Mohler, W. H.												
Neltzey, George												
Carmody, Simon												
Gleason, Albert												
Kirby, Thomas												
Shipman, J. J.*												
McCann, Thomas†												

\* Informal.

† All McCann's bids exceed the legal limit of \$2.25 per square yard, and are therefore informal.

Schedule of bids opened June 21, 1879, for asphaltum and granite block pavements—Continued.

Names.	3,792 square yards, F street between First and Fourth streets.			6,092 square yards, Pennsylvania av. cut in between Fourth and Sev- enth streets southeast.			1,832 square yards, I street between Ninth and Tenth streets northwest.			1,420 square yards footwalk.			1,166 lineal feet curb and corners.			1,090 cubic yards grading.		
	Per yard.	Total.	Per yard.	Per yard.	Total.	Per yard.	Per yard.	Total.	Per yard.	Per foot.	Total.	Per yard.	Per foot.	Total.	Per yard.	Total.	Per yard.	Total.
Baldwin, J. S.	\$1 55	\$5,877 60	\$1 65	\$10,051 80	\$1 60	\$2,931 20	\$0 08	\$113 60	\$0 06	\$0 06	\$69 66	\$0 25	\$0 25	\$272 50				
Murdock, W. C.	1 64	6,218 88	1 64	9,990 88	1 54	3,004 48	50	710 00	10	116 60	116 60	30	327 00					
Bailey French Paving Company	1 62	6,143 04	1 62	9,869 04	1 52	2,951 04	15	213 00	15	174 90	174 90	25	272 50					
McLean, John	2 25	8,532 00	2 25	13,707 00	2 25	4,023 00	65	923 00	20	253 20	253 20	30	327 00					
Taylor, John	1 68½	6,389 52	1 68½	10,265 02														
McKnight, Burns & Co.																		
McKnight, W. E.																		
Adams, W. H., & Co.																		
Nash, B. K., & Co.																		
Joyce, Thomas																		
Draney, F. M.																		
McLaughlin & Chidmore																		
Buckley, William																		
Mohler, W. H.																		
Neltze, George																		
Carmody, Albert																		
Glenn, Thomas																		
Shuman, J. J.*																		
McCam, Thomas†																		

† All McCam's bids exceed the legal limit of \$2.25 per square yard, and are therefore informal.

\* Informal.

Schedule of bids opened June 21, 1879, for asphaltum and granite block pavements—Continued.

## Granite.

Names.	1,100 square yards. C street between Seventh and Eighth streets.			2,890 square yards. Seventh street and Louisiana avenue intersec- tion.			5,892 square yards. Ninth street be- tween P and U streets.			9,105 square yards. First street, be- tween Pennsl. North Capital and Fourth streets.			8,120 square yards. H street between North Capital and Fourth streets.			9,000 square yards. New Jersey ave- nue, between B and E streets, southeast.		
	Per yard.	Total.	Per yard.	Per yard.	Total.	Per yard.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.
Baldwin, J. S.																		
Murdock, W. C.	\$2 17	\$2,387 00		\$2 17	\$6,271 30	\$2 17	\$2 17	\$12,785 64	\$2 17	\$19,758 95	\$2 17	\$17,620 40	\$2 17	\$17,620 40	\$2 17	\$19,530 00		
Bailey French Paving Company	2 20	2,420 00		2 20	6,358 00	2 20	2 20	12,962 40	2 20	20,631 10	2 20	17,864 00	2 20	17,864 00	2 20	19,800 00		
McLean, John																		
Taylor, Jonathan	1 92½	2,120 25		1 92½	5,369 15	1 92½	1 92½	11,415 75	1 92½	17,349 88	1 92½	15,651 30	1 92½	15,651 30	1 92½	17,347 50		
Cantford, Hoffman & Ellbert																		
McKnight, Burns & Co.	1 87	2,637 00		1 87	5,404 50	1 87	1 87	11,018 04	1 87	17,926 25	1 87	15,184 40	1 87	15,184 40	1 87	16,830 00		
Vermilion, W. E.	1 91	2,101 00		1 91	5,219 80	1 91	1 91	11,784 09	1 91	17,860 45	1 91	16,577 60	1 81	16,577 60	1 81	16,290 00		
Adams, W. H., & Co.	1 89	2,079 00		1 89	5,462 10	1 89	1 89	11,165 88	1 89	17,208 45	1 89	15,346 80	1 80	15,346 80	1 80	17,010 00		
Nash, R. K., & Co.	1 95	2,145 00		1 90	5,491 00	1 90	1 90	11,194 80	1 89	17,208 45	1 95	15,824 00	1 90	15,824 00	1 90	17,100 00		
Joyce, Thomas	1 93	2,123 00		1 93	5,577 70	1 93	1 93	11,901 84	1 96	17,843 80	1 98	16,577 60	1 93	16,577 60	1 93	17,370 00		
Draney, F. M.	1 94	2,134 00		1 94	5,606 60	1 94	1 94	11,420 46	1 94	17,618 18	1 93	15,752 60	1 94	15,752 60	1 94	17,460 00		
McLanghlin & Cadmore	1 93½	2,128 00		1 93½	5,502 15	1 93½	1 93½	11,754 54	1 93½	17,618 18	1 93½	15,752 60	1 94	15,752 60	1 94	17,460 00		
Buckley, William	1 94	2,134 00		1 94	5,606 60	1 94	1 94	12,314 00	1 94	17,618 18	1 94	16,564 80	1 94	16,564 80	1 94	17,460 00		
Mohler, W. H.	2 13	2,343 00		2 13	6,135 70	2 13	2 13	12,667 80	2 12½	19,218 42	2 12	17,214 40	2 12	17,214 40	2 12	19,680 00		
Nottzky, George	2 04	2,244 00		2 04	5,895 68	2 04	2 04	12,019 68	2 04	18,572 50	2 04	16,364 80	2 04	16,364 80	2 04	18,360 00		
Carmody, Simon	2 12	2,352 00		2 11	6,097 80	2 16	2 16	12,726 72	2 09	19,129 15	2 09½	17,370 80	2 09	17,370 80	2 09	19,530 00		
Gleason, Albert	2 17	2,387 00		2 17	6,271 30	2 17	2 17	12,785 64	1 99	18,118 05	1 99	16,158 80	1 99	16,158 80	1 99	17,910 00		
Kirby, Thomas									1 80	17,208 45	1 88	15,265 60	1 89	15,265 60	1 89	17,010 00		
Shipman, J. J.																		
McAnn, Thomas†																		

\* Informal.

† All McAnn's bids exceed the legal limit of \$2.25 per square yard, and are therefore informal.





Schedule of bids opened June 28, 1879, for second section of Boundary auxiliary sewer.

Names.	9,500 cubic yards excavation and refilling.					42,000 cubic yards earth hauled and hauled 6,000 feet over 200 feet.					5,250 cubic yards concrete masonry.					9,120 cubic yards brick masonry.					4,470 cubic yards trap-rock ma- sonry.					10,000 feet board meas- ure, sheet piling left in trench.					Aggregate.
	Per yard.	Total.	A yard.	Per 100 ft.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.						
J. G. Leone	20	\$19,000 00	\$1 10	\$1 10	\$12,500 00	3 00	\$15,750 00	\$5 10	\$46,512 00	2 25	\$10,057 50	\$20 00	\$200 00	\$104,120 60																	
T. G. Smith	17	16,150 00	1 00	1 00	18,900 00	2 50	13,125 00	4 95	45,144 00	2 37	10,583 50	23 00	230 00	104,143 90																	
V. K. Nash & Co.	18	17,100 00	1 10	1 10	12,000 00	3 20	16,800 00	5 50	50,160 00	2 45	10,951 50	23 00	230 00	107,731 60																	
Glenison & Hubber.	16 1/2	15,912 50	1 00 1/2	1 00 1/2	12,000 00	3 80	19,950 00	5 31	48,427 50	2 46	10,960 50	25 00	250 00	108,025 90 1/2																	
Kirby & Co.	17	16,150 00	1 00	1 00	9,450 00	4 00	21,000 00	5 35	54,204 00	2 55	10,057 50	25 00	250 00	111,172 50																	
J. Taylor	24	22,800 00	1 50	1 50	25,200 00	3 12	16,380 00	4 96	45,235 20	2 12	9,476 40	35 00	350 00	113,268 10																	
Thomas Joyce	18 1/2	17,100 00	1 00	1 00	12,000 00	3 70	19,425 00	5 35	48,792 00	2 23	9,968 10	20 00	200 00	113,785 60																	
McCabe & Speller.	18	17,100 00	1 00	1 00	18,900 00	4 25	22,312 50	5 75	52,440 00	2 75	12,292 50	25 00	250 00	123,296 00																	
D. B. Cooper	33 1/2	31,666 66	40	40	9,450 00	3 60	18,900 00	5 70	51,984 00	2 50	11,175 00	20 00	200 00	123,376 06																	
Smith & Cranford.	28 1/2	27,075 00	90	90	12,000 00	3 45	18,112 50	6 00	54,720 00	2 49	11,130 30	22 50	225 00	123,863 70																	
O'Hare & Brennan	25	23,750 00	50	50	18,900 00	4 00	21,000 00	6 70	61,104 00	2 00	8,940 00	16 00	160 00	127,554 50																	
H. Gantz & Co.	30	28,500 00	90	90	18,900 00	3 55	18,637 50	5 60	51,072 00	2 45	10,951 50	16 00	160 00	128,221 90																	
J. V. W. Vandenberg.	25	23,750 00	1 00	1 00	25,200 00	4 00	21,000 00	6 00	54,720 00	2 30	10,281 00	20 00	200 00	135,152 00																	
B. J. Coyle & Co.	27	25,650 00	80	80	37,800 00	4 25	22,312 50	6 00	54,720 00	2 20	9,834 00	18 00	180 00	150,497 30																	
Mohler & Reynolds.	29	27,550 00	1 75	1 75	126,000 00	3 29	17,272 50	5 53	50,433 60	2 75	12,292 50	39 00	390 00	233,940 35																	

# 494 REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA

*Schedule of bids opened July 21, 1879, for minor repairs to bituminous pavements.*

Names.	Surface, 5,000 square yards.		Binder, 126 cubic yards.		Base, 13 cubic yards.		Total.
	Per square yard.	Total.	Per cubic yard.	Total.	Per cubic yard.	Total.	
H. L. Cranford .....	\$0 46½	\$2,325 00	\$4 85	\$611 10	\$1 90	\$24 70	\$2,960 80
W. C. Maylock .....	59	2,950 00	4 74	597 24	42 49	552 37	3,579 61
Jonathan Taylor .....	56½	2,850 00	3 95	497 70	42 24½	549 18	3,351 88

*Schedule of bids opened July 24, 1879, for dredging outlets of Tiber sewer and B-street branch of Tiber sewer.*

Names.	Material excavated and deposited in accordance with plans and specifications.		Material excavated and deposited in accordance with plans and specifications.		Dredging and depositing material on each side of cut for B-street outlet.		Total.
	Per cubic yard.	Total.	Per cubic yard.	Total.	Per cubic yard.	Total.	
F. B. Colton .....	\$0 19¼	\$13,580 00	\$0 21	\$10,500 00	\$0 07½	\$5,460 00	\$24,080 00
T. P. Morgan, jr. ....	40	28,000 00	28	14,000 00	30	21,000 00	42,000 00

Schedule of bids opened July 25, 1879, for the improvement of South Capitol Street.

Names.	23,392 cubic yards grading.		3,008 lined feet blue-stone curb setting.		6,881 lined feet granite curb setting.		178,6 corners (set- ting).		10,000 lined feet 12-inch flag.		4,500 lined feet 16 including (laying).	
	Per yd.	Total.	Per ft.	Total.	Per ft.	Total.	Each.	Total.	Per ft.	Total.	Per ft.	Total.
Thomas Joyce	\$0 14	\$3,274 88	\$0 07½	\$225 60	\$0 07½	\$516 07	\$0 12	\$21 43	\$0 02½	\$250 00	\$0 03	\$135 00
John Cudmore	13	3,040 96	06	180 48	06½	447 26	08	14 08	01	100 00	02½	112 50
P. Maloney	15	3,508 88	06	180 48	07	481 07	30	53 58	01½	150 00	02	90 00
James Gannon and Thomas M. Steeps	14½	3,332 23	06½	195 52	08	550 48	20	35 72	02½	275 00	05	225 00
William Buckley*	14½	3,332 23	06½	195 52	08	550 48	20	35 72	02½	275 00	05	225 00
Mohler & Reynolds	11½	3,976 64	07½	225 60	08½	548 81	08	14 08	03	300 00	04	180 00
Simon Carmody†	11½	3,976 64	07½	225 60	08½	548 81	07	12 50	05	500 00	06½	282 50
Thomas Kirby	19	4,444 48	06	180 48	06½	447 26	12	14 08	01	100 00	02½	112 50
O'Hare & Brennan	25	5,848 00	07	210 56	09	619 29	12	21 43	04	400 00	05	225 00
J. G. Stafford	18½	4,386 00	09	270 72	09	619 29	14	25 00	04	400 00	07	315 00
Names.	4,000 square yards cobble-stone gut- ters.		4,600 square yards brick sidewalk.		27,437 yards gravel roadway.		8 sewer-traps.		400 lined feet 12-inch sewer-pipe.		Aggregate.	
	Per yd.	Total.	Per yd.	Total.	Per yd.	Total.	Each.	Total.	Per ft.	Total.		
Thomas Joyce	\$0 17	\$680 00	\$0 08	\$368 00	\$0 06	\$1,646 21	\$8 00	\$64 00	\$0 25	\$100 00	\$7,288 19	
John Cudmore	28	1,120 00	09	414 00	08½	2,327 00	12	96 00	12	48 00	7,900 34	
P. Maloney	20	800 00	13	598 00	06½	1,783 10	25	200 00	30	120 00	7,965 83	
James Gannon and Thomas M. Steeps	19	760 00	07	322 00	08	2,194 96	8	64 00	40	160 00	8,314 91	
William Buckley*	22	900 00	14	644 00	05½	1,577 62	14	112 00	18	72 00	8,779 58	
Mohler & Reynolds	17	680 00	12	552 00	09	2,469 33	8	64 00	19	76 00	9,423 38	
Simon Carmody†	28	1,120 00	09	414 00	08½	2,327 14	14	112 00	12	48 00	9,362 91	
Thomas Kirby	25	1,000 00	10	400 00	12	3,262 44	12	96 00	25	100 00	11,271 70	
O'Hare & Brennan	18	720 00	11	506 00	08	2,194 96	19	152 00	20	80 00	9,668 97	
J. G. Stafford												

\* Embankment, 22 cents per cubic yard; excavation, 11 cents per cubic yard.

† No security given; informal.

Schedule of bids opened August 13, 1879, for improvement of Dunbarlon Street, Georgetown, D. C.

Sinner.	3,530 cubic yards grading, filled big haul.		1,970 linear feet by 20 blue-stone curbs.		1,070 linear feet laying 12-inch gutter flag.		257 square yards laying and cobble- stone gutter.		1,410 square yards laying brick pavements.		1,470 square yards graveling road- way		Total.
	Per yard.	Total.	Per foot.	Total.	Per foot.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	
P. M. Draney	\$0 15	\$529 50	\$0 11	\$117 70	\$0 04	\$42 80	\$0 21	\$54 97	\$0 12	\$169 20	\$0 7	\$102 90	\$1 037 07
William Buckley	18	6525 40	8	85 60	34	37 45	21	74 97	13	183 30	7 1	110 25	1 138 97
Culmore & Maloney	25	882 50	10	107 00	3	32 10	18	64 26	10	141 00	8	117 00	1 234 46
M. J. Langhlin	36	1,059 00	10	107 00	4	42 80	22	78 54	10	141 00	10	147 00	1,575 34
O'Hare & Brennan*													
J. E. Febrey*													
Mohler & Reynolds													
Gannon & Steep													
Albert Gibson													

\* Informal.

Schedule of bids opened August 13, 1879, for improvement of M street north.

Names.	7,700 cubic yards grading, haul included.		5,040 lineal feet 5 by 20 blue-stone curb.		75.2 lineal feet setting corners.		4,400 lineal feet laying 12-inch gutter-flag.		2,400 lineal feet laying cross-flag.		2,040 lin. ft. furnishing and laying cobble-stone gutters.	
	Per yd.	Total.	Per ft.	Total.	Per ft.	Total.	Per ft.	Total.	Per ft.	Total.	Per yd.	Total.
F. M. Draney	\$0 12	\$924 00	\$0 06	\$302 40	\$0 10	\$7 52	\$0 02	\$88 00	\$0 03	\$72 00	\$0 20	\$408 00
Stephen Taft	14	1,078 00	8	403 20	8	6 02	4	176 00	5	120 00	10	204 00
M. J. Laughlin	12	924 00	9	453 60	12	9 03	3	132 00	5	120 00	14	285 60
Cudmore & Maloney	14	1,078 00	8	403 20	15	11 28	2 1/2	110 00	3 1/2	84 00	18	367 20
Thomas Joyce	17	1,309 00	9 1/2	474 80	15	11 28	2 1/2	154 00	4 1/2	108 00	17	346 80
William Buckley	14	1,078 00	7 1/2	378 00	8	6 02	3 1/2	163 00	5	120 00	21	428 40
O'Hare & Brennan*												
J. E. Febrey*												
Mohler & Reynolds*												
Gannon & Steeps*												
Albert Gleason												

Names.	2 933 sq. yards laying brick pavement.		12 222 sq. yards grading road-way.		Building 6 sewer-traps.		360 lin. feet laying pipe-sewer connections.		Total.
	Per yd.	Total.	Per yd.	Total.	Each.	Total.	Per ft.	Total.	
F. M. Draney	\$0 10	\$293 30	\$0 03 1/2	\$427 77	\$8 00	\$48 00	\$0 20	\$72 00	\$2,642 99
Stephen Taft	6	175 98	3	366 66	15 00	90 00	20	72 00	2,691 86
M. J. Laughlin	9	263 97	4	488 88	11 00	66 00	35	126 00	2,869 86
Cudmore & Maloney	8	234 64	6	733 32	20 00	120 00	20	72 00	3,213 64
Thomas Joyce	8	234 64	4	488 88	8 00	48 00	30	108 00	3,287 40
William Buckley	13	381 29	6	733 32	8 00	48 00	20	72 00	3,410 03
O'Hare & Brennan*									
J. E. Febrey*									
Mohler & Reynolds*									
Gannon & Steeps*									
Albert Gleason									

\* Informal.

## Schedule of bids opened August 13, 1879, for improvement of New Hampshire Avenue.

Names.	10,500 cubic yds. grading, including haul.		4,320 lin. ft. 5 by 20 blue-stone curb.		59.4 lin. ft. setting corners.		4,320 lin. ft. 12-inch gutter-flag laying.		1,200 lin. ft. laying 16-inch flag.		1,940 sq. yards furnishing and laying cobble gutter.	
	Per yd.	Total.	Per ft.	Total.	Per ft.	Total.	Per ft.	Total.	Per ft.	Total.	Per yd.	Total.
F. M. Draney	\$0 16	\$2,640 00	\$0 08	\$345 60	\$0 11	\$6 53	\$0 03	\$129 60	\$0 04½	\$54 00	\$0 20	\$388 00
William Buckley	21	3,465 00	07½	304 00	08	4 75	03½	140 40	05	64 00	22	420 00
Cudmore & Maloney	15	2,475 00	09	388 80	15	8 91	03	129 60	04	48 00	18	348 00
M. J. Laughlin	27	4,455 00	10	432 00	14	8 32	04	172 80	06	72 00	23	446 20
O'Hare & Brennan*												
J. E. Febrey*												
Mohler & Reynolds*												
Gannon & Steeps*												
Albert Gleason*												
Names.												
	2,880 square yds. laying brick pavements.		12,444 sq. yards graveling road-way.		Building 6 sewer-traps.		300 lineal feet pipe-sewer connection.		Total.			
	Per yd.	Total.	Per yd.	Total.	Each.	Total.	Per ft.	Total.				
F. M. Draney	\$0 10	\$288 00	\$0 05	\$622 20	\$8 50	\$51 00	\$0 23	\$69 00			\$4,593 93	
William Buckley	13	374 40	08	985 52	8 00	48 00	20	60 00			5,878 87	
Cudmore & Maloney	08	230 40	06½	808 86	20 00	120 00	20	60 00			4,618 77	
M. J. Laughlin	10	288 00	10	1,244 40	13 00	78 00	35	105 00			7,301 72	
O'Hare & Brennan*												
J. E. Febrey*												
Mohler & Reynolds*												
Gannon & Steeps*												
Albert Gleason*												

\* Informal.

Schedule of bids opened August 13, 1879, for improvement of North Capitol Street.

Name.	13,270 cu. yards grading, & in- cluding haul.		4,860 lineal feet, setting 5 by 20 B. S. curb.		1,500 lineal feet, taking up and re- setting 5 by 20 B. S. curb.		84.6 lineal feet, setting cor- ners.		28.6 lineal feet, taking up and resetting cor- ners.		4,680 lineal feet, laying 12-inch gutter-flag.		1,500 lineal feet, taking up and relaying 12-in. gutter-flag.		1,800 lineal feet, laying 16-inch cross-flag.	
	Per yard.	Total.	Per foot.	Total.	Per foot.	Total.	Per foot.	Total.	Per foot.	Total.	Per foot.	Total.	Per foot.	Total.	Per foot.	Total.
Thomas Kirby.....	\$0 12	\$1,592 40	\$0 7	\$327 60	\$0 4	\$63 60	\$0 12	\$10 15	\$0 10	\$2 22	\$0 24	\$117 00	\$0 1	\$15 90	\$0 5	\$80 00
F. M. Draney.....	123	1,691 93	7	327 60	5	79 50	10	8 46	8	2 26	2	93 60	2	31 80	3	54 00
M. J. Laughlin.....	12	1,592 40	10	468 00	7	111 30	14	11 84	10	2 62	4	187 20	2	31 80	6	108 00
Thomas Joyce.....	16	2,123 20	94	444 60	5	79 50	15	12 69	5	1 41	34	103 80	1	15 90	44	81 00
Cudmore & Maloney.....	14	1,857 80	8	374 40	44	71 55	15	12 69	8	2 26	24	117 00	14	23 85	34	63 00
William Buckley.....	14	1,857 80	7 1/2	351 00	5 1/2	91 42	8	6 77	9	2 53	34	152 10	2 1/2	39 75	5	90 00
Stephen Talley.....	18	2,388 60	9	421 20	6	95 40	8	6 77	6	1 69	4	187 20	3	47 70	5	90 00
O'Hare & Brennan *.....																
J. E. Febrey *.....																
Mohler & Reynolds *.....																
Gannon & Steeps *.....																
Albert Gleason *.....																

Name.	600 lineal feet, taking up and relaying 16-in. cross-flag.		2,093 sq. yards, furnishing and laying cobble- stone gutter.		530 sq. yds., tak- ing up and re- laying cobble- stone gutter.		3,120 sq. yards, laying brick pavements.		1,000 sq. yards, taking up and relaying brick pavements.		16,335 sq. yards, graveling road- ways.		Building 10 sewer-traps.		500 lineal feet, laying pipe- sewer connec- tions.		Total.
	Per foot.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Each.	Total.	Per foot.	Total.	
Thomas Kirby.....	\$0 2 1/2	\$15 00	\$0 15	\$313 95	\$0 6	\$31 80	\$0 10	\$312 00	\$0 06	\$62 60	\$0 5	\$816 75	\$9 00	\$90 00	\$0 15	\$75 00	\$3,937 57
F. M. Draney.....	2 1/2	15 00	20	418 60	7 1/2	39 75	10	312 00	10	106 60	4	653 40	8 30	85 00	23	345 00	4,093 90
M. J. Laughlin.....	2	18 00	15	313 95	8	42 40	10	312 00	6	62 60	4	653 40	13 00	130 00	34	510 00	4,216 71
Thomas Joyce.....	2	12 00	17	355 81	7	37 10	8	249 60	5	53 00	6	98 10	8 00	80 00	30	450 00	4,839 71
Cudmore & Maloney.....	2	21 00	18	376 74	8	42 40	8	249 60	6	62 60	5	816 75	9 00	90 00	15	225 00	4,628 66
William Buckley.....	3 1/2	21 00	21	439 53	8 1/2	45 05	13	405 60	8	84 80	6	980 10	8 00	80 00	20	300 00	4,747 45
Stephen Talley.....	3	18 00	18	376 74	7	37 10	7	218 40	8	84 80	5	816 75	15 00	150 00	25	375 00	5,065 35
O'Hare & Brennan *.....																	
J. E. Febrey *.....																	
Mohler & Reynolds *.....																	
Gannon & Steeps *.....																	
Albert Gleason *.....																	

\* Informal

Schedule of bids opened September 12, 1879, for asphaltum and granite block pavements.

Names.	Asphaltum.				Granite block pavements.															
	490 sq. yds., 5th street, between L and P, n.w.		490 sq. yds., 20th street, bet. Pa. ave. and I.		3,330 sq. yds., Delaware ave, bet. B and C sts.		4,670 sq. yds., C st., bet. Del. ave. and 1st.		1,000 sq. yds., Market Space, bet. 8th and 9th streets.		1,820 sq. yds., 20th street, bet. I and K.		1,500 sq. yds., 21st street, bet. Pa. ave. and K.		4,310 sq. yds., 2d street, bet. Fayette and High.		650 sq. yds., F st., bet. 7th and 9th streets.		2,165 sq. yds., 9th street, between Pa. ave. and B.	
	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.	Per yard.	Total.
McKnight & Burns					\$1 91	\$6,360 30	\$1 88	\$9,919 70	\$1 91	\$1,910 00	\$1 83	\$3,476 20	\$1 91	\$2,865 00	\$1 91	\$8,282 10	\$1 91	\$1,241 50	\$1 91	\$4,135 15
Cardmy & Hines					2 05	6,826 50	2 05	9,373 50	2 06	7,009 00	2 00	3,640 00	2 00	3,000 00	2 00	8,620 00	2 00	1,417 00	2 06	4,459 00
Vanderlip & Co.	\$2 25	\$11,432 30	\$2 25	\$1,102 50	2 00	6,660 00	2 00	9,340 00	2 00	2,000 00	2 00	3,640 00	2 00	3,000 00	2 00	8,620 00	2 00	1,300 00	2 00	4,320 00
J. S. Baldwin	1 47	7,290 30	1 47	720 30																
H. L. Cranford					2 14	7,126 20	2 14	9,965 80	2 14	2,140 00	2 15	3,913 00	2 16	3,340 00	2 16	9,309 60	2 14	1,391 00	2 14	4,393 10
Neitzey & Acker					2 03	6,759 90	2 03	9,480 10	2 03	2,030 00	2 15	3,913 00	2 15	3,225 00	2 15	9,265 50	2 15	1,387 50	2 03	4,394 95
Albert Gleason																				
Bailey French	1 45	7,380 50	1 57	769 30	1 92	6,393 60	1 92	8,960 40	1 91	1,910 00	1 92	3,494 40	1 92	2,880 00	1 93	8,313 30	1 95	1,267 50	1 91	4,135 15
Paving Company	1 46	7,431 40	1 46	715 40	1 98	6,363 40	1 98	9,240 60	1 98	1,980 00	1 98	3,063 60	1 98	2,950 00	1 94	8,361 40	1 98	1,287 00	1 98	4,286 70
Thomas Joyce	1 99	10,129 10	1 99	975 10	1 93	6,426 90	1 93	9,015 10	1 93	1,930 00	1 93	3,512 60	1 93	2,975 00	1 93	8,313 30	1 93	1,254 50	1 93	4,178 43
J. Taylor					2 05	6,826 50	2 05	9,373 50	2 05	2,050 00	2 05	3,712 60	2 05	3,075 00	2 05	8,855 50	2 05	1,332 50	2 05	4,429 35
Wm. Buckley					2 03	6,826 50	2 03	9,373 50	2 00	2,065 00	2 08	3,785 60	2 08	3,120 00	2 08	9,964 80	2 08	1,332 00	2 06	4,470 72
W. C. Murdock	1 46	7,431 40	1 46	715 40	2 03	6,826 50	2 03	9,373 50	2 08	2,080 00	2 05	3,731 00	2 05	3,075 00	2 07	9,907 90	2 07	1,345 50	2 08	4,503 40
F. M. Draney																				
Mohler & Reynolds					2 03	6,759 90	2 03	9,480 10	2 08	2,080 00	2 05	3,731 00	2 05	3,075 00						

\* Informal.



Schedule of bids opened September 18, 1879, for improvement of Tenth street west between B street and Maryland avenue south.

Names.	Grading 3,025 cubic yards.		Setting 132 lineal feet 5x20 blue-stone curb.		Resetting 1,250 lineal feet 5x20 blue-stone curb.		Laying 748 lineal feet 12-inch flag.		Relaying 552 lineal feet 12-inch flag.		Relaying 492 lineal feet 16-inch cross-flag.		Relaying 700 square yards cobble-stone.		Laying 1,050 square yards brick pavement.		Relaying 1,050 square yards brick pavement.		Graveling 2,261 square yards roadway.		Aggregate.
	Per yd.	Total.	Per ft.	Total.	Per ft.	Total.	Per ft.	Total.	Per ft.	Total.	Per ft.	Total.	Per yd.	Total.	Per yd.	Total.	Per yd.	Total.	Per yd.	Total.	
William Buckley .....	\$0 14	\$23 50	\$0 06½	\$9 93	\$0 04	\$19 20	\$0 02	\$14 96	\$0 01½	\$8 28	\$0 02	\$9 82	\$0 09	\$63 00	\$0 10	\$105 00	\$0 10	\$105 00	\$0 06½	\$152 02	\$941 30
Simon Carmody .....	14½	438 62	09	13 68	06	73 80	02	14 96	01½	9 66	02½	13 53	07½	54 25	05½	60 37	06	63 00	09	203 49	945 36
Stephen Talty .....	12½	378 12	08	12 16	07	86 10	02½	18 70	02	11 04	03	14 76	08	56 00	10	105 00	13	136 50	08	180 88	999 66
James Gannon .....	15½	468 87	06	9 12	06	73 80	02	14 96	02½	13 80	02½	12 30	09½	66 50	09	94 50	11	115 50	08	180 88	1,050 23
B. Reardon .....	18	544 50	10	15 20	07	86 10	05	37 40	05	27 60	08	39 36	10	70 00	10	105 00	10	105 00	09	203 49	1,233 65
J. M. McLaughlin .....	22	665 50	06	9 12	06	73 80	02½	18 70	02	11 04	03	14 76	08	56 00	08	84 00	09	94 50	10	226 10	1,255 52

Schedule of bids opened September 18, 1879, for improvement of C street south, between Ninth and Thirteenth-and-a-half streets west.

Names.	Grading 3,950 cubic yards		Setting 100 lineal feet 5x20 blue-stone curb.		Resetting 1,336 lineal feet 5x20 blue-stone curb.		Laying 1,568 lineal feet 12-inch flag.		Relaying 840 lineal feet 12-inch flag.		Relaying 900 square yards cobble-stone.		Laying 2,370 square yards brick pavement.		Relaying 1,170 square yards brick pavement.		Graveling 3,052 square yards roadway.		Aggregate.		
	Per yd.	Total.	Per ft.	Total.	Per ft.	Total.	Per ft.	Total.	Per ft.	Total.	Per yd.	Total.	Per yd.	Total.	Per yd.	Total.	Per yd.	Total.			
Simon Carmody .....	\$0 14½	\$72 75	\$0 9	\$9 00	\$0 5½	\$76 62	\$0 2	\$31 36	\$0 1½	\$14 70	\$0 2½	\$8 25	\$0 7½	\$69 75	\$0 05½	\$136 37	\$0 06	\$70 20	\$0 9	\$331 38	\$1,320 28
William Buckley .....	14	533 00	03	6 50	4	53 44	2	31 36	1½	12 60	2	6 00	9	81 00	10	237 00	10	117 00	6½	248 53	1,346 13
Stephen Talty .....	12½	493 75	8	8 00	7	93 52	24	39 20	3	16 80	3	9 00	8	72 00	10	237 70	13	152 10	8	294 56	1,416 31
James Gannon .....	16	632 00	03	6 50	7	93 52	2	31 36	2	16 80	3	9 00	10	90 00	10	237 70	10	117 00	7½	276 15	1,510 03
J. M. McLaughlin .....	22	869 00	6	6 00	6	80 16	2½	39 20	3	16 80	3	9 00	8	72 00	9	189 60	9	105 30	10	368 20	1,755 26

## Q.—REPORT OF THE SUPERINTENDENT OF PROPERTY.

OFFICE OF THE COMMISSIONERS  
OF THE DISTRICT OF COLUMBIA,  
*Washington, October 10, 1879.*

GENTLEMEN: I have the honor to transmit herewith the annual report of the Superintendent of Property for the year ending June 30, 1879.

It is most gratifying to be able to report that the present system of purchasing supplies, as inaugurated by the Commissioners, has given general satisfaction. Few, if any, grounds for complaint have arisen, and the workings of the office have been far more effective and harmonious than in previous years when no such system prevailed and supplies were purchased at random, without active competition or an intelligent regard to the needs and interests of the District.

To thoroughly establish this system has required time and faithful attention to the wants and wishes of the heads of the various branches of the government, and their hearty co-operation (without which it could never have been successful) has been promptly and cheerfully accorded, and I desire publicly to thank all the officers of the government for their kind indulgence and cordial support in perfecting a system of so much importance—one which, it is safe to say, is as expeditious, effective, and economical a method as can be devised for supplying the multitudinous wants of a large municipal government.

In this connection I desire to invite your attention to the fact that the duties of the office have been largely on the increase during the past three years, and especially since the abolition of the late boards of health and metropolitan police commissioners—the purchasing of supplies for these branches of the government having added at least one-half to the work of the office. In view of these facts I respectfully and urgently recommend that a more liberal provision be made for the employés of the office.

Accompanying this will be found the tabulated statements of purchases and disbursements, as per vouchers.

In conclusion, permit me to thank you, gentlemen, personally and officially, for the uniform kindness and consideration always received at your hands.

Very respectfully,

E. B. TOWNSEND,

*Superintendent of Property, District of Columbia.*

The Hon. COMMISSIONERS OF THE DISTRICT OF COLUMBIA.

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CLASS 1.—Stationery.

Total amount purchased, as per invoices and vouchers..... \$8,973 25

Issued as follows to—

Commissioners' office.....	267 45
Engineer's office.....	2,062 46
Water registrar's office.....	329 95
Auditor and comptroller's office.....	169 54
Treasurer and assessor's office.....	403 17
Collector's office.....	550 12
Attorney's office.....	48 51
Surveyor's office.....	110 53

# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 503

District offices .....	\$182 13
Public schools .....	3,100 54
Fire department .....	105 54
Metropolitan police .....	774 23
Police court .....	215 78
Washington Asylum .....	76 45
Health office .....	502 62
Registrar of wills .....	73 00
Coroner .....	1 23

8,973 25

## CLASS 2.—Blank forms and printing.

Total amount, as per invoices and vouchers .....	<u>\$13,526 71</u>
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### Issued as follows to—

Commissioners' office .....	500 98
Engineer's office .....	1,505 42
Water registrar's office .....	401 43
Auditor and comptroller's office .....	235 30
Treasurer and assessor's office .....	328 11
Collector's office .....	3,943 94
Attorney's office .....	1,112 74
Surveyor's office .....	6 82
District offices .....	589 68
Public schools .....	3,147 35
Fire department .....	126 71
Metropolitan police .....	630 42
Police court .....	73 99
Washington Asylum .....	53 71
Health office .....	866 71
Coroner .....	3 40

13,526 71

## CLASS 3.—School books.

Total amount purchased, as per invoices and vouchers .....	<u>\$5,448 07</u>
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### Issued as follows to—

Public schools .....	5,448 07
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## CLASS 4.—Furniture.

Total amount purchased, as per invoices and vouchers .....	<u>\$11,609 96</u>
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### Issued as follows to—

Commissioners .....	46 75
Engineer's department .....	386 35
Water registrar's office .....	294 90
Auditor and comptroller's office .....	8 10
Treasurer and assessor's office .....	18 00
Collector's office .....	12 42
Public schools .....	4,547 68
Fire department .....	3,805 12
Metropolitan police .....	892 47
Police court .....	518 96
Washington Asylum .....	405 72
Health office .....	473 22
Fire-alarm telegraph .....	200 27

11,609 96

## CLASS 5.—Hardware.

Total amount purchased, as per invoices and vouchers .....	<u>\$26,017 11</u>
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### Issued as follows to—

Commissioners .....	22 00
Engineer's office .....	1,051 50
Water registrar .....	17,845 11
Auditor and comptroller .....	22 00

## 504 REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA.

Treasurer and assessor.....	\$0 65
Collector .....	154 00
Surveyor .....	8 55
Various District offices.....	8 50
Public schools .....	2,679 57
Fire department .....	1,295 78
Metropolitan police .....	274 22
Police court .....	125 83
Washington Asylum.....	1,340 34
Fire-alarm telegraph .....	842 38
Parking commission.....	316 90
Health office .....	24 27
Northern market .....	5 51
	<hr/>
	26,017 11

## CLASS 6.—Groceries.

Total amount purchased as per invoices and vouchers.....	\$9,444 26
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## Issued as follows to—

Engineer office .....	122 38
Water registrar .....	37
Attorney.....	3 00
Surveyor.....	1 63
Public schools.....	42 23
Fire department .....	58 37
Metropolitan police.....	73 95
Police court.....	2 50
Washington Asylum.....	9,134 08
Health officer.....	5 75
	<hr/>
	9,444 26

## CLASS 7.—Dry goods, &amp;c.

Total amount purchased as per invoices and vouchers.....	\$2,548 57
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## Issued as follows to—

Commissioners .....	10 36
Engineer office .....	22 86
Public schools .....	37 97
Fire department .....	535 49
Police court.....	29 95
Metropolitan police.....	104 25
Washington Asylum.....	1,799 99
Fire-alarm telegraph .....	7 70
	<hr/>
	2,548 57

## CLASS 8.—Boots and shoes.

Total amount purchased as per invoices and vouchers.....	\$786 65
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## Issued as follows to—

Engineer office (use in sewers).....	54 00
Washington Asylum.....	732 65
	<hr/>
	786 65

## CLASS 9.—Saddlery.

Total amount purchased as per invoices and vouchers.....	\$11,442 80
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## Issued as follows to—

Commissioners .....	10 35
Engineer office .....	119 47
Water registrar .....	157 00
Surveyor .....	1 50
District offices .....	66 75
Fire department.....	10,160 06
Police court.....	37 65
Metropolitan police.....	115 05
Washington Asylum.....	88 77
Parking commission.....	639 00
Health office .....	47 20
	<hr/>
	11,442 80

# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 505

## CLASS 10.—*Drugs, chemicals, and paints.*

Total amount purchased as per invoices and vouchers ..... \$5,153 27

### Issued as follows to—

Engineer office.....	\$960 15
Water registrar.....	565 78
Fire-alarm telegraph.....	471 09
Health office.....	256 84
Eastern market.....	1 41
Surveyor District Columbia.....	2 04
Public schools.....	675 75
Fire department.....	579 33
Metropolitan police.....	43 66
Police court.....	1 32
Washington Asylum.....	1,595 63
Parking commission.....	70

5,153 70

## CLASS 11.—*Lumber and building material.*

Total amount purchased as per invoices and vouchers..... \$11,225 09

### Issued as follow to—

Engineer office.....	3,759 35
Water registrar.....	303 60
Health office.....	252 71
Fire-alarm telegraph.....	32 45
Public schools.....	2,547 70
Fire department.....	128 64
Metropolitan police.....	3 21
Police court.....	1 30
Washington Asylum.....	1,017 56
Parking commission.....	3,178 57

11,225 09

## CLASS 12.—*Forage.*

Total amount purchased as per invoices and vouchers..... \$5,809 16

### Issued as follows to—

Engineer office.....	175 44
Water registrar.....	378 78
Fire Department.....	3,219 47
Metropolitan police.....	231 11
Police court.....	97 80
Washington Asylum.....	1,353 80
Health office.....	352 76

5,809 16

## CLASS 13.—*Meats.*

Total amount purchased as per invoices and vouchers..... \$5,169 08

### Issued as follows to—

Washington Asylum.....	5,165 08
Engineer office (tallow).....	4 00

5,169 08

## CLASS 14.—*Ice.*

Total amount purchased as per invoices and vouchers ..... \$615 94

### Issued as follows to—

Attorney's office.....	\$5 34
District offices.....	292 25

# 506 REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA.

Public schools.....	\$20 10
Fire department.....	137 90
Metropolitan police.....	39 72
Police court.....	61 82
Washington Asylum.....	38 25
Health office.....	9 80
Fire-alarm telegraph.....	10 76

615 94

## CLASS 15.—*Street lamps, lamp-posts, and castings.*

Total amount purchased as per invoices and vouchers..... \$2,048 41

Issued as follows to—

Engineer office..... \$2,048 41

## CLASS 16.—*Fuel.*

Total amount purchased as per invoices and vouchers..... \$17,387 69

Issued as follows to—

Engineer office.....	45 88
Water registrar.....	3,930 86
Sealer of weights and measures.....	7 15
Parking commission.....	9 48
Fire-alarm telegraph.....	10 03
Attorney.....	15 14
Surveyor.....	84 39
District offices.....	468 37
Public schools.....	8,715 21
Fire department.....	898 65
Metropolitan police.....	1,066 77
Police court.....	146 71
Washington Asylum.....	1,857 95
Health office.....	131 10

17,387 69

## CLASS 17.—*Construction material.*

Amount on hand per last report, July 1, 1878..... \$42,341 45

Amount purchased to June 30, 1879..... 26,309 21

Total to be accounted for to date..... 68,650 66

Issued as follows:

To the engineer department for the improvement of streets, alleys, and county roads..... \$19,317 81

For permit work on streets, alleys, and avenues..... 15,514 32

Balance remaining on hand June 30, 1879..... 33,818 53

Total to be accounted for, for the year ending June 30, 1879..... 68,650 66

## CLASS 18.—*Miscellaneous supplies, expenses and repairs.*

Commissioners' office:

For livery..... \$903 20

Engineer department:

For repairs to instruments, &c..... \$244 78

For rent property yards..... 300 00

For repairing street lamps, &c..... 351 55

For hauling old material from M street, northwest..... 254 21

1,150 54

Water registrar:

For machinery and repairing same..... 322 68

For miscellaneous..... 10 68

For white-oak pump-logs..... 83 40

For carpenter-work..... 41 35

For repairs to public vehicles..... 53 75

For blacksmithing, &c..... 974 47

For one horse..... 175 00

1,661

# REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA. 507

## Surveyor:

For carpenter-work and repairs .....	\$1 75	
For repairs to public vehicles .....	87 02	
For repairs to stoves, &c .....	43 94	
For repairs to instruments .....	51 80	
For book binding .....	12 50	
For livery .....	300 00	
		\$500 01

## Public schools:

For engraving plates in school report .....	85 00	
For book binding .....	191 75	
For freight (deducted from bills for school furniture) .....	246 27	
For repairing stoves, &c .....	408 54	
For drayage .....	37 75	
		969 31

## Fire department:

For painting .....	33 00	
For carpenter work and repairs .....	19 55	
For repairing clocks .....	6 25	
For electrical apparatus .....	109 00	
For repairing stoves .....	6 75	
For engine heaters .....	693 50	
For gas fixtures .....	174 50	
For respirators .....	151 10	
For miscellaneous items .....	113 84	
For repairs to apparatus .....	2,955 00	
For veterinary surgeon .....	250 00	
For pasture .....	50 00	
		4,517 49

## Police court:

For blacksmithing .....	49 50	
For carpenter-work, &c .....	44 65	
For repairs to van .....	58 25	
For plumbing .....	71 85	
For awnings .....	24 00	
For repairs to stoves .....	124 23	
For repairs to clocks .....	2 00	
For seal and press .....	25 00	
For whitewashing .....	9 00	
For drayage .....	17 50	
		425 99

## Metropolitan police:

For blacksmithing .....	42 75	
For new ambulance .....	250 00	
For repairs to public vehicles .....	209 52	
For carpenter-work .....	209 17	
For plumbing, &c .....	238 94	
For repairs to stoves and new ones .....	342 85	
For drayage .....	58 00	
For repairs to clocks .....	2 00	
For miscellaneous .....	111 77	
		1,465 00

## Washington Asylum:

For blacksmithing .....	13 50	
For repairs to public vehicles .....	128 50	
For stoves, furnaces, &c., and repairs to same .....	433 80	
For new bellows .....	25 00	
For garden and other seed .....	52 93	
For miscellaneous items .....	233 74	
		887 47

## Treasurer and assessors:

For carpentering and repairs .....	21 80	
For blacksmithing .....	7 50	
For repairs to public vehicle .....	39 42	
For repairs to stoves .....	2 75	
For painting .....	12 00	
For bookbinding .....	14 00	
For labor .....	21 00	
For miscellaneous .....	3 25	
		121 72

# 508 REPORT OF COMMISSIONERS OF DISTRICT OF COLUMBIA.

Parking commission:		
For repairs to public vehicles .....	\$19 67	
For blacksmithing .....	72 25	
For miscellaneous .....	25 83	
		\$117 75
Fire-alarm telegraph:		
For carpentering .....	35 50	
For battery-cells .....	205 00	
For wire .....	173 03	
For plumbing .....	58 45	
For repairs to vehicles .....	30 87	
For miscellaneous .....	25 00	
		527 85
Health office:		
For cartridges .....	50 10	
For repairs to public vehicles .....	123 47	
For carpentering and repairs .....	93 85	
For file-boxes .....	144 40	
For blacksmithing .....	44 25	
For repairing stoves .....	37 50	
For disinfecting alleys .....	193 13	
For plumbing .....	123 44	
For repairing clocks .....	5 00	
For whitewashing .....	8 25	
For awnings .....	44 00	
For painting .....	23 50	
For papering .....	21 94	
For drayage .....	54 00	
For miscellaneous .....	48 50	
		1,015 33
Various offices:		
For blacksmithing .....	151 63	
For advertising .....	64 67	
For carpenter-work and repairs .....	493 26	
For bookbinding .....	185 00	
For repairs to public vehicles .....	490 29	
For repairs to stoves, furnaces, &c .....	468 07	
For labor .....	319 14	
For miscellaneous items .....	285 69	
For washing towels, &c .....	147 44	
For labor .....	4 38	
		2,609 57
Total for miscellaneous supplies, expenses, and repairs .....	16,872 56	
Total for the year ending June 30, 1879 .....	222,729 67	

E. B. TOWNSEND,  
Superintendent of Property, D. C.

## R.—LETTER OF THE COMMISSIONERS TO THE WATER-TAKERS IN THE DISTRICT OF COLUMBIA.

*To the Water-takers of Washington and Georgetown:*

Considerable misapprehension exists in the public mind in respect to the recently-established water-rates. This concerns you only, and the Commissioners deem it just to inform you fully of the condition of the water department.

For several years past that department has not been self-sustaining as contemplated in the law, Congress not having given authority to establish such rates as would produce sufficient revenue. The necessity for increase of revenue arises in the legislation of the late legislature of the District. It ordered a 36-inch main water-pipe to be laid from the dis-



tributing-reservoir to the city, the only main not laid by the United States. This main cost nearly \$500,000, and 7 per cent. bonds were issued in payment; interest and sinking fund to be paid out of water-rents. The legislature failed to increase the water-rates to provide for the increased burden thus thrown upon the water department. The legislature also enacted that the tax levied for distributing mains, that is, mains laid within the city, should be payable in five installments, but provided no fund to pay the immediate cost of such mains, which then had to be advanced from water-rates. The former Board of Commissioners asked authority to increase the water-rates to meet these increased demands, as did the present board soon after its organization.

During the fiscal year ending June 30, 1878, \$166,350 of 8 per cent. water certificates were paid. These were issued by authority of the act of the legislative assembly approved June 23, 1873, and payment was to have been provided from collections of water-main taxes; but a large amount of these taxes remain uncollected, and, in consequence, advances were made from water-rents and general funds to pay these certificates, thus further embarrassing the department.

The unpaid water-main taxes, amounting to \$111,043.65, represent advances from "water-rents" to pay the cost of laying the mains at the time the work was done.

The following exhibit shows the present indebtedness of the department:

Water bonds outstanding.....	\$408,000 00
Sinking fund due to the general fund for year ending June 30, 1879.....	15,000 00
Interest due to the same fund for year ending June 30, 1879.....	29,600 00
Total .....	452,600 00
Taxes due for laying mains.....	111,043 65
Excess of indebtedness July 1, 1879.....	341,557 65

The receipts of the department for the fiscal year ending June 30, 1879, were as follows:

From water-rents .....	\$83,583 08
From taps and permits .....	3,969 25
From water-main taxes.....	21,079 95
Total .....	108,632 28

Total estimated requirements for all purposes of department for the year ending June 30, 1880:

For current expenses of department.....	\$45,800
For interest and sinking fund on bonds for 1879 .....	44,600
For interest and sinking fund on bonds for 1880.....	43,560
For laying distributing mains.....	12,000
For improvement of water supply to high grounds.....	25,000
Total, including interest and sinking fund for two years.....	170,960

Hence the necessity to largely increase the water-rates; but this increase is greater than the actual requirements for the current expenses of the department for the year 1880, because the amount collected in the past was insufficient. Had the authority been given last year to regulate the water-rates, the necessary increase would have been smaller than is now required, and a delay of another year would have rendered a still further increase in rates absolutely necessary.

The estimated receipts from new rates are as follows:

From water-rents of private residences .....	\$106,570 00	
From water-rents of special rates to business places .....	30,000 00	\$136,570 00
Less 10 per cent. for delinquencies and unoccupied premises .....	13,657 00	\$122,913 00
From water-taps and permits .....		3,969 25
From water-main taxes .....		21,000 00
Total estimated receipts .....		147,882 25

The following table shows the estimated number of houses to be charged each rate from \$5 to \$15 for domestic purposes, and the gross estimated receipts therefrom:

6,100 houses paying \$5 each .....	\$30,500
2,000 " " 6 " .....	12,000
2,000 " " 7 " .....	14,000
1,000 " " 8 " .....	8,000
940 " " 9 " .....	8,460
1,200 " " 10 " .....	12,000
630 " " 11 " .....	6,930
320 " " 12 " .....	3,840
180 " " 13 " .....	2,340
500 " " 14 " .....	7,000
100 " " 15 " .....	1,500
14,970 .....	106,570

Some houses assessed under \$500, or others assessed much higher, having only hydrants in yard, will pay but \$4; but this will not materially affect the above showing, which is the maximum amount that can be collected.

It is an approximate result, the data not being sufficient to make close estimates for the current year; but it is clear that the indebtedness to the general fund cannot be returned in full from the collections of one year derived from the newly-established rates. The Commissioners hope to reduce the current expenses of the department to about \$36,000, instead of \$45,800, as estimated.

Under the old system, based upon the width and height of houses, premises having no fixtures within the house, and obtaining water from hydrants in the yard, often paid two and three times more than other houses having all the modern conveniences. This system had been maintained since 1859. In the interval the character and style of houses has greatly changed. Now in the smallest the so-called modern improvements are introduced. Then a bath-tub was a rare thing in a house in Washington. Now houses are mostly built with narrow frontage, and with every convenience within them. To add, say, 30 per cent. to the existing rates obviously would be perpetuating a wrong, for the occupant of the 16 feet front modern house enjoys more water privileges than the one in the older house of 40 feet frontage. Under the old system, supposing both two-story houses, the former paid \$3 and the latter \$9. In the former case it would be adding 30 per cent. upon \$3, or an increase of 90 cents; in the latter 30 per cent. upon \$9, or an increase of \$2.70. The former would then have paid a total of \$3.90 and the latter of \$11.70, the effect being to increase and prolong the existing wrong.\*

\* The Commissioners had in their experience an instance illustrating this wrong. One of their number, whose house is well supplied with water-fixtures, formerly paid less water-rent than a neighbor living in an inexpensive house and dependent upon a hydrant in the yard for water supply. Under the new rate the former pays \$14 for his house and \$3 for his stable, being \$17 in all, while the latter pays \$4, the two amounts probably representing fairly their comparative use of water.

The Commissioners, then, could not adopt a simple addition of a percentage to the old rates and adhere to the old rule of width and number of stories as a measure for water-rent, a method distinctly condemned by Congress.

They thought, and still think, that the water-meter presents the only absolutely just basis for payment of water-rates; but its immediate adoption is impracticable, and would probably be unacceptable to water-takers. Hence some other method had to be adopted. Naturally, a charge of so much per spigot first presented itself, but a little reflection will satisfy any one that the number of spigots is no guide for measuring the comparative consumption of water in houses. Inquiries were made in regard to the water systems in use in the various cities, and the attention of the Commissioners was particularly drawn to the Boston system of making the assessed value of premises a factor in determining water-rates. But in that city the value of land as well as of the improvements is taken into consideration, which practice did not seem to the Commissioners to be just. The character of the house might be and is a measure of the style of living, and, therefore, of the use of water, but the value of the land could not affect this question. Hence they adopted the assessed value of houses only as a factor. Then the question was, what amount is it necessary to charge the average small two-story houses, having the usual fixtures, as a minimum charge? To reach a conclusion in this matter inquiries were first directed to how many houses there are in Washington and Georgetown. It was found that in Washington there are 23,479, and in Georgetown 2,177, a total of 25,656 houses. Of these 14,970 take water as per the following table:

Table showing the number of houses paying water-rates, their classification, and the amounts paid.

Former rates.	No. of houses of two stories.	No. of houses of three stories.	No. of houses of four stories.	No. of houses of five stories.	Total.
\$3 00 to \$4 00.....	6,829	.....	.....	.....	6,829
4 00 to 5 00.....	706	3,535	.....	.....	4,241
5 00 to 6 00.....	227	896	963	.....	2,086
6 00 to 7 00.....	48	480	475	48	1,051
7 00 to 8 00.....	41	76	287	25	429
8 00 to 9 00.....	28	39	43	17	127
9 00 to 10 00.....	9	42	16	3	70
10 00 to 11 00.....	10	10	23	.....	43
11 00 to 12 00.....	5	3	15	.....	23
12 00 to 13 00.....	5	20	14	1	40
13 00 to 14 00.....	1	5	13	1	20
14 00 to 15 00.....	1	1	3	.....	5
15 00 to 16 00.....	1	1	3	.....	4
16 00.....	1	1	.....	.....	1
17 00.....	1	1	.....	.....	1
18 00.....	1	1	.....	.....	1
19 00.....	1	1	.....	.....	1
20 00.....	1	1	.....	.....	1
21 00.....	1	1	.....	.....	1
22 00.....	1	1	.....	.....	1
Total number of houses.....	.....	.....	.....	.....	14,970

Of the 25,656 houses in the two cities 10,696 do not take water.

The assessed valuation of these houses show that 10,043 are assessed below \$500 each, leaving 15,613 assessed at \$500 and upwards, or only 623 more houses than the whole number taking water.

The number and valuation of houses is shown in the following table :

\$500 to \$1,000 .....	6,357
1,000 to 1,500 .....	2,139
1,500 to 2,000 .....	2,052
2,000 to 2,500 .....	1,079
2,500 to 3,000 .....	981
3,000 to 4,000 .....	1,234
4,000 to 5,000 .....	647
5,000 to 6,000 .....	329
6,000 to 7,000 .....	183
7,000 and over .....	612
Total .....	15,613

From this table it is seen that of the 15,613 houses assessed at \$500 or upwards, 10,548 are assessed at \$2,000 or under, this number being more than two-thirds of all furnished with Potomac water. There are but 1,771 houses assessed at \$4,000 and upwards, and only 612 assessed at over \$7,000. Of this entire list of houses assessed at \$500 and upwards, it is probable that over 623 do not take water, and this number is distributed over the entire range of assessed houses. The Commissioners, after careful consideration of the tables, concluded that four dollars would be a reasonable charge for the introduction of water upon premises where no fixtures existed in the houses, as would probably be the case where improvements were assessed under \$500. They fix \$5 as the rate upon houses assessed from \$500 to \$1,000, the great majority of such buildings having in them modern conveniences. There being 6,357 so assessed in the two cities, it was clear that about 6,000 must be water-takers. Under the old system 6,829 houses are charged between \$3 and \$4. The rates for them, therefore, are increased from \$1 to \$2. Finally, under the old system there were 14,207 paying from \$3 to \$7 water-rent. Under the present system there are 13,842 that pay from \$4 to \$10, the great majority paying between \$5 and \$7.

Under the present system the more valuable houses taking water, being one-third of the whole number, are made to pay a rate exceeding \$7, a system whereby the expense of the department, it is believed, is distributed more in accordance with the general system of taxation—that is, in proportion to the valuation of property—than has heretofore prevailed.

It may be said that there should have been a distinction between houses valued over \$10,000, and made to pay \$15 rent as a maximum; but the Commissioners thought that this being three times as much as is paid by nearly one-half of all supplied with water, it would not be just to impose an addition for a higher valuation, especially as such houses have, in addition, quite large stable charges. This is a matter, however, reserved by them for further consideration.

The present condition of the water supply is such as to cause actual distress upon the higher levels of the city. Two remedies are practicable; one, the suppression of waste; the other, the increase of the supply.

The result to be anticipated from a resort to measurement of water can be shown as follows :

The total amount of water brought to the two cities daily is 24,000,000 gallons. How much of this is wasted in the various departments of government is unknown; but if we suppose 400 gallons to be the average daily consumption for each house, the total used for domestic purposes would be 6,000,000 gallons, or one-fourth of the whole brought

to the cities. A charge of seven-tenths of one cent per one hundred gallons (far less than the usual charge in cities) would give an annual revenue, allowing 10 per cent. for delinquencies and unoccupied houses, of \$137,970, or more than the estimated receipts from the present established rates. It is possible a charge of one-half cent per 100 gallons would support the department. Street-washers, being outside the water-meters, would be used, subject to proper regulation, without additional charge. This method would also end a great and needless waste.

Existing defects in the introduction of water from the distributing reservoir and in the distribution within the city, from which those living on the higher levels are suffering, can be remedied only through heavy expenditures, which will fall upon water-takers, not upon the general public.

An unlimited provision of water would be a most desirable thing, but its cost should be understood before entering upon any plan for its introduction. With a view to ascertain the amount required and to determine the nature and character of work involved, careful investigations have been made.

Two plans are proposed: one contemplating prolonging the present conduit to the immediate vicinity of the city; the other simply laying an additional main. In either case the dam at the Great Falls must be completed, since at certain seasons the present mains carry all the water that the conduit now delivers. The Commissioners have regarded the plan for extension of the conduit, although the most expensive, as the best method of increasing the supply, since by this means the water can be delivered in immensely greater quantities and at a somewhat higher level than can be done by laying one new main. It is also a permanent improvement. The latter, however, involves the least immediate outlay, and as a measure of temporary relief would be effective.

The cost of a 3-foot main has been estimated by the engineers in charge of the aqueduct at \$398,000. At the present reduced price of iron the commissioners estimate, however, that a 4-foot main, which would double the present supply, could be laid for \$350,000. To this must be added the completion of the dam, estimated at \$200,000, giving a total of \$550,000.

The interest at five per cent. and a sinking fund to extinguish the debt in thirty years will lay an additional burden of \$45,833 upon the water-takers of the city for the first year, which would be annually reduced by the operation of the sinking fund. It must be borne in mind, also, that any increase in the supply of water, unless accompanied by an increase in the reservoir capacity, will result in bringing the water into the city in a condition unfit for domestic use.

Finally, the law requires that the water department shall be self-sustaining; that its funds shall be appropriated to no purposes other than those of the department, and that it shall not be made a source of profit to the District treasury. For several years past it has not been self-sustaining, and the present government is suffering from the acts, or failures to act, of the late governments in the District.

By order of the board.

S. L. PHELPS,  
*President.*

## APPENDIX R 1.

OFFICE OF THE COMMISSIONERS  
OF THE DISTRICT OF COLUMBIA,  
*Washington, September 18, 1879.*

SIR: The Commissioners of the District of Columbia have the honor to transmit to the committee of the Senate, in answer to their letter dated July 3, 1879, a statement of the expenditures of the water department from June 30, 1860, to June 30, 1879. It will be observed that the expenditures are not given during the interval extending from June 30, 1871, to November 1, 1871, and from November 1, 1873, to June 20, 1874, the records being in such condition that the expenditures during those periods cannot be correctly ascertained.

It will also be observed that the interest and sinking fund on the bonded debt of the water department has been carried, either in whole or in part, by the general fund, which amounts should be added in order to determine the amount by which the department has heretofore been assisted by the general fund.

As shown in the statement, the excess of expenditures above receipts is \$208,394.61.\*

The interest on the bonded debt during the year ending June 30, 1879, is held by the Treasury as a debit against the department.

The statement inclosed in the form of a letter by the Commissioners to the water-takers of the District makes an exhibit of the current expenses of the department and the means by which the Commissioners have attempted to meet the accumulating indebtedness. The current expenses were therein estimated at \$45,000. They have since been reduced to \$30,000 beyond which no further reduction can be made. The interest and sinking fund for the past year unpaid is \$44,610. and \$43,560 for the current year. The total of these expenses, not taking into account the laying of laterals or the purchase of materials, is beyond any possible receipts of the department. The sinking fund, then, both for the past and present year, can receive no payments.

The condition of the water supply has been a cause of great anxiety. With the present consumption the supply is not sufficient to afford a constant delivery by gravity above the 100-foot level, although during the night an increased head is attained, amounting to about 114 feet.

The high services of Georgetown and Washington are working satisfactorily, although already driven to their utmost capacity.

It is only a question of a year or more when the pumps will be totally unable to supply the demand. We have then to provide at once some remedy for the high and low service alike.

Washington does not stand alone in this difficulty. Nearly all the great cities find themselves in the same condition with regard to their water supply, and are giving the same anxious study to the means of relief.

The general proposition is self-evident—either the supply must be increased or the excessive consumption must be restrained. So far as the Commissioners are aware, the engineers of all cities are attempting to repress the waste of water, beginning with manufactories and business houses, and afterwards extending their efforts to the domestic consumption. There is no public sentiment which can be relied upon to give any assistance. Such is the experience of the last fifteen years. The facts

\*The uncollected water-taxes, when paid, will reduce this amount by \$106,710.90.

are plainly given in the published reports of the officers in charge of the water-works of the cities of New York, Boston, Providence, and Chicago.

The conclusion has also been gradually reached by the slow process of experience that methods of inspection are practically useless. All are now agreed that the only method of repression is by the use of meters. The water-takers of all cities, including Washington, are equally bent on resisting their introduction. It is not worth while to enter into any discussion in regard to the various objections urged, some of which are certainly valid: as, for instance, their expense, which in many cases has been extortionate, and the fact that the majority of meters used are worthless for actual service. These are questions which can be better settled by examining the working of the system where it has been extensively introduced.

The Commissioners are more especially concerned in bringing clearly to the attention of your committee the methods by which the deficiency in the water supply may be overcome, since any method to be successful must receive the distinct sanction of Congress.

Two means of increasing the supply have been suggested—one is to lay an additional main from the present reservoir, the other to prolong the conduit to a point in the immediate vicinity of the city. Of these two plans the Commissioners have preferred the latter, as being in the line of the ultimate extension and completion of the water-works, and as assuring a vastly greater supply delivered at a higher level. The delivery at the highest level practicable is of great importance, since it will reduce to the smallest dimensions the area to be supplied by the high service.

Capitol Hill, which is the most distant of the elevated plateaus to be supplied by gravity from the distributing reservoir, has an elevation of 95 feet along the line of East Capitol street. The highest possible level of the water in the present distributing reservoir is 145 feet. There is then an available head of only 50 feet, which is liable to be reduced from time to time to 47 feet, while the distance to be overcome is over four miles. The loss of head in 30, 36, and 48 inch mains, per 1,000 feet, is given in the following tables, different formulas being used:

Required: Loss of head in 30, 36, and 48 inch mains, per 1,000 feet, when delivering 12,000,000 gallons per diem, or 18.5668 cubic feet per second.

30-inch main, velocity 3.7821 feet per second:

	Feet.
Loss of head per 1,000, feet Fanning.....	1.575
Loss of head per 1,000 feet, D'Arcy.....	1.787
Loss of head per 1,000 feet, Beardmore.....	2.289

36-inch main, velocity 2.6266 feet per second:

Loss of head per 1,000 feet, Fanning.....	0.614
Loss of head per 1,000 feet, D'Arcy.....	0.730
Loss of head per 1,000 feet, Beardmore.....	0.921

48-inch main, velocity 1.4775 feet per second:

Loss of head per 1,000 feet, Fanning.....	0.132
Loss of head per 1,000 feet, D'Arcy.....	0.172
Loss of head per 1,000 feet, Beardmore.....	0.218



*Delivery of 48-inch main with, 20 feet loss of head in 30,000 feet.*

Velocity (feet per second):

Fanning .....	3.388
D'Arcy .....	2.908
Beardmore .....	2.582

Discharge (cubic feet per second):

Fanning .....	42.575
D'Arcy .....	36.543
Beardmore .....	32.448

Discharge (gallons per day):

Fanning .....	27,516,860
D'Arcy .....	23,618,290
Beardmore .....	20,971,630

It is desirable, then, to give as free a circulation and the largest reservoir capacity in the mains consistent with economy in order to insure even a very moderate pressure in this locality.

Twelve millions of gallons per diem is assumed as the least quantity by which it would be worth the while to increase the present supply, which may be approximately stated at 24,000,000 daily. Such an increase would undoubtedly afford a present relief, and by using the main exclusively for the high-gravity service would provide an ample supply for some years to come. It is to be borne in mind, however, that the estimates for such a main include no additional reservoir capacity, which will become necessary in order to deliver the water in a condition fit for domestic purposes. It also includes no estimate of the expense of completing the dam at the Great Falls.

A great advantage will be gained by prolonging the conduit, for this reason: that its line lies along the high grounds on the north of the city, and the present distributing mains can be re-enforced directly from the conduit as occasion may require, without entailing any large expenditure for connections.

The Commissioners again transmit a report, previously made to the Senate committee, on the subject of the prolongation of the conduit and its necessary connections, accompanied by a map of the proposed route and profile of the country. After a careful consideration of the subject, they see no reason to change the estimates therein submitted. As much smaller estimates for this work have been submitted by others, it becomes necessary to explain the reason for the discrepancies.

The main point at issue is the necessity for an additional reservoir. Such a reservoir involves a direct expenditure of \$350,000, in addition to a large item for land condemnation for its site, and also 3,000 feet additional length of conduit.

The reservoir is necessary for two reasons. The first concerns the mechanical construction of the conduit.

Barring great accidents, which may be provided against by reasonable care, such a construction is liable, from time to time, to require repairs on account of longitudinal cracks where carried on embankment, and minor leaks arising from unforeseen causes. Such repairs can only be made by drawing the water off for a greater or less time, depending on the nature of the injury. The Commissioners hold it to be an axiom that water cannot be turned off from a sewered city. They therefore say that a reservoir capacity of not less than five days' supply must be provided.

The second reason concerns the condition in which the water should be delivered.



The report of the engineer in charge of the aqueduct shows the condition of the water to be as follows:

## WASHINGTON AQUEDUCT.

[Extract from annual report of Col. Thomas L. Casey for the year ending June 30, 1879.]

Observations of the comparative clearness of the water at Great Falls, the receiving reservoir, and the distributing reservoir were taken and recorded daily. The results are shown in the following table:

Name of source.	Number of days that the water was —			
	Clear.	Slightly turbid.	Turbid.	Very turbid.
Great Falls .....	107	67	71	120
Receiving reservoir .....	152	72	67	74
Distributing reservoir .....	195	38	94	38

The iron mains leading to Washington have been supplied with water directly from the distributing reservoir, and the condition of the water delivered in Georgetown and Washington has, consequently, been similar to that in this reservoir.

From this we learn that during 38 days out of 365 the water is very muddy; that is to say, in a condition unfit for domestic use. What will be the state of affairs when the daily supply is doubled or trebled, and when the water is delivered from the river in one-half or one-third of the time now required? Manifestly much worse than at present. This fact is decisive. We must interpose between the river and the dwellings, to which water is delivered, reservoirs of ample size to act as settling basins, in whose depths the heavier impurities may be deposited, or resort must be had to extended and expensive systems of filtration by which these impurities may be strained away. The conditions here are not such as to make it advisable to attempt the construction of filtering galleries. The Commissioners are therefore of the opinion that in increasing the water supply not only an additional distributing reservoir must be provided, but that the storage capacity of the existing distributing reservoir should be improved by increasing the depth to not less than 20 feet.

In addition to the difference in estimates resulting from the adoption of a large reservoir, some other discrepancies exist in the land condemnation or purchase of right of way along the line of the conduit, in the special constructions required for the passage of Rock Creek, and in the fact that the Commissioners have thought it desirable that the new conduit and reservoir should be in some way connected with the present system of mains in the city.

The Commissioners therefore say that the expense of the prolonged conduit, with its proper reservoir and connections, will be, in round numbers, \$1,100,000, and with \$200,000 added for the dam at the Great Falls, \$1,300,000. Who is to pay it? If the United States should assume the liability for the purpose of carrying to completion a work so magnificently begun, the matter is simple. If the burden is to be laid upon the water-takers, it might be as well to count the annual cost: Interest at 5 per cent., \$65,000; sinking fund to extinguish the debt in

forty years, \$32,500; total, \$97,500, a sum greater by one-third than the total present revenue of the water department.

This is an unpleasant outlook for a bankrupt department. If we are to be content with an incomplete conduit and impure water, a somewhat better monetary statement could be made. But this the Commissioners apprehend would scarcely meet the views of the citizens of the District.

By order of the board.

S. L. PHELPS,  
President.

HON. ISHAM G. HARRIS,  
Chairman Senate Committee on the District of Columbia.

*Water supply of different cities.*

City.	Year.	Population.	Daily average consumption.	Consumption per head.
			Gallons.	Gallons.
Providence .....	1877	100,000	2,500,800	25
Lowell .....	1877	50,000	1,631,360	33
Cambridge .....	1877	48,000	2,631,730	55
Lynn .....	1877	32,600	1,101,800	34
Fall River .....	1877	45,000	4,173,600	96
Boston, Cochituate Works .....	1877	280,000	20,673,500	74
Lawrence .....	1877	25,000	1,554,060	64
Boston, Cochituate and Mystic Works .....	1877	390,000	29,059,800	74
Montreal .....	1877	130,000	8,979,500	69
Boston, Mystic Works .....	1877	110,000	8,386,260	76
Brooklyn .....	1877	485,000	30,342,900	63
Cincinnati .....	1877	280,000	15,945,210	57
Toronto .....	1877	75,000	5,776,750	77
Philadelphia .....	1877	817,500	48,984,000	58
Saint Louis .....	1877	400,000	22,349,443	56
Cleveland .....	1877	136,000	7,726,920	56
Detroit .....	1877	110,200	11,543,120	105
Chicago .....	1877	440,000	52,183,800	119
Columbus .....	1876	34,000	1,448,900	43
Buffalo .....	1877	135,000	11,691,200	87
Rochester .....	1877	82,000	2,872,990	35
Milwaukee .....	1877	130,000	6,944,200	53
Washington .....	1878	143,518	24,000,000	160

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